

# **First Quarter 2006 Groundwater Monitoring Report**

**Former Simpson Remanufacturing Facility  
Arcata, California**

Prepared for:

**Simpson Timber Company**



**Consulting Engineers & Geologists, Inc.**

812 W. Wabash  
Eureka, CA 95501-2138  
707/441-8855

April 2006  
003154



Reference: 003154

April 7, 2006

Mr. Ryan Miya  
Department of Toxic Substances Control  
Northern California-Coastal Cleanup Operations Branch  
700 Heinz Avenue, Suite 200  
Berkeley, CA 94710-2721

**Subject: First Quarter 2006 Groundwater Monitoring Report, Former Simpson Remanufacturing Facility; Arcata, California**

Dear Mr. Miya:

SHN Consulting Engineers & Geologists, Inc (SHN) is providing you with the first quarter 2006, groundwater-monitoring report for the Former Simpson Remanufacturing Facility, Arcata, California. SHN performed the groundwater monitoring on February 9, 2006.

Please call me at 707/441-8855 if you have any questions.

Sincerely,

**SHN Consulting Engineers & Geologists, Inc.**

A handwritten signature in black ink, appearing to read "F. B. Lowman".

Frans B. Lowman, P. G.  
Project Manager

FBL/ADM:lms

Enclosure: Report

copy w/encl: Kasey Ashley, RWQCB  
Rob Ricci, Simpson Timber Company  
Lane Devries, Sun Valley Floral Farms

Reference: 003154

# **First Quarter 2006 Groundwater Monitoring Report**

**Former Simpson Remanufacturing Facility  
Arcata, California**

Prepared for:

**Simpson Timber Company**

Prepared by:



Consulting Engineers & Geologists, Inc.  
812 W. Wabash  
Eureka, CA 95501-2138  
707/441-8855

April 2006

QA/QC: FBL\_\_

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## **Abbreviations and Acronyms**

<	denotes a value that is "less than" the method detection limit
mV	millivolts
ppm	parts per million
mg/L	milligrams per Liter
ug/L	micrograms per Liter
BGS	Below Ground Surface
CaCO <sub>3</sub>	Calcium Carbonate
DCE	Dichloroethene
DCO <sub>2</sub>	Dissolved Carbon Dioxide
DO	Dissolved Oxygen
DTSC	California Department of Toxic Substances Control
EPA	Environmental Protection Agency
MW-#	Monitoring Well-#
NA	Not Analyzed
ND	Not Detected
NM	Not Measured
NS	Not Sampled
ORP	Oxidation-Reduction Potential
PCP	Pentachlorophenol
RWQCB	California Regional Water Quality Control Board, North Coast Region
SHN	SHN Consulting Engineers & Geologists, Inc.
SLR-#	well point-number
TCP	Tetrachlorophenol
VOCs	Volatile Organic Compounds

# **1.0 Introduction**

This report presents the results of groundwater monitoring activities for the first quarter 2006, conducted at the Former Simpson Remanufacturing Facility located in, Arcata, California (Figure 1). SHN Consulting Engineers & Geologists, Inc. (SHN) performed this work on behalf of the Simpson Timber Company. This work was requested by the California Department of Toxic Substances Control (DTSC), and the California Regional Water Quality Control Board, North Coast Region (RWQCB).

This report is presented in five sections. This section introduces the reader to the site. Section 2.0 discusses the scope of work completed at the site during the first quarter 2006 monitoring event. Section 3.0 presents the results of the groundwater-monitoring program. Section 4.0 presents a discussion of the results and recommendations for future activities. Section 5.0 presents a list of references cited.

## **1.1 Vicinity Information**

The former remanufacturing facility is located at 3315 Foster Avenue, Arcata, Humboldt County, California (Figure 2). The majority of the site is located in the southeast quarter of Section 19, T6N, R1E, Humboldt Base and Meridian. The area is zoned industrial and agricultural exclusive. Site elevation is approximately 20 feet (National Geodetic Vertical Datum 1929) and the topography is relatively flat.

## **1.2 Site History**

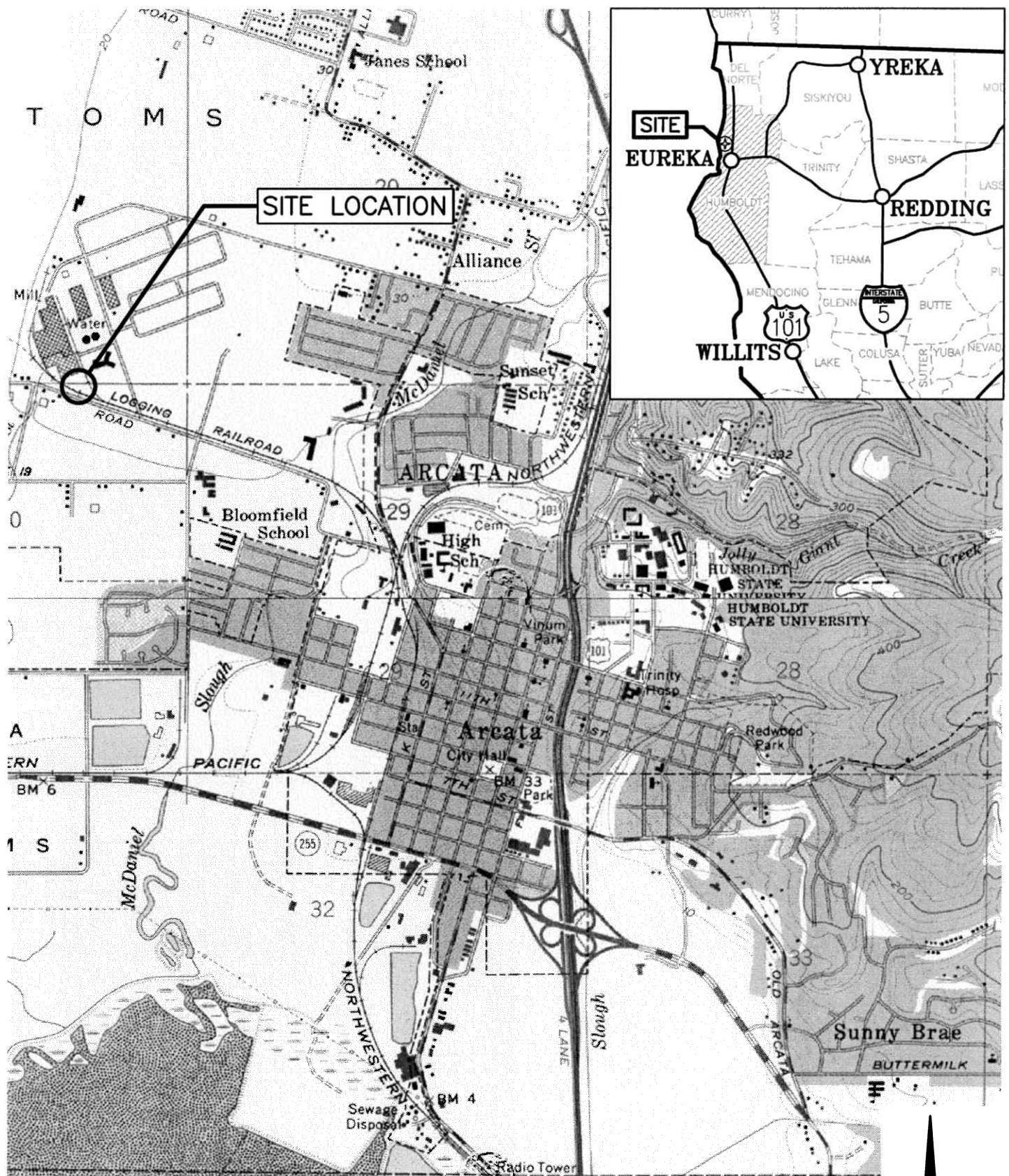
The site was initially developed in 1951. Operations included processing rough sawn boards into finished dimensional lumber and siding. In 1989, the facility was closed and the plant equipment was sold. In May 1999, Sun Valley Floral Farms purchased the site. Subsurface investigations have been performed at various locations throughout the site, including soil excavation at several locations. A detailed description of previous activities is included in the final removal action work plan (EnviroNet, 1997).

On January 21 and 22, 2004, SHN supervised the installation of monitoring wells MW-7 and MW-8 (Figure 3). Wells were installed by Fisch Environmental of Valley Springs, California. Wells MW-7 and MW-8 were subsequently added to the existing monitoring well network.

Groundwater beneath the site was monitored on a quarterly basis in 2004. Groundwater monitoring ceased after that time, but was resumed during the third quarter of 2005.

## **1.3 Geology and Hydrology**

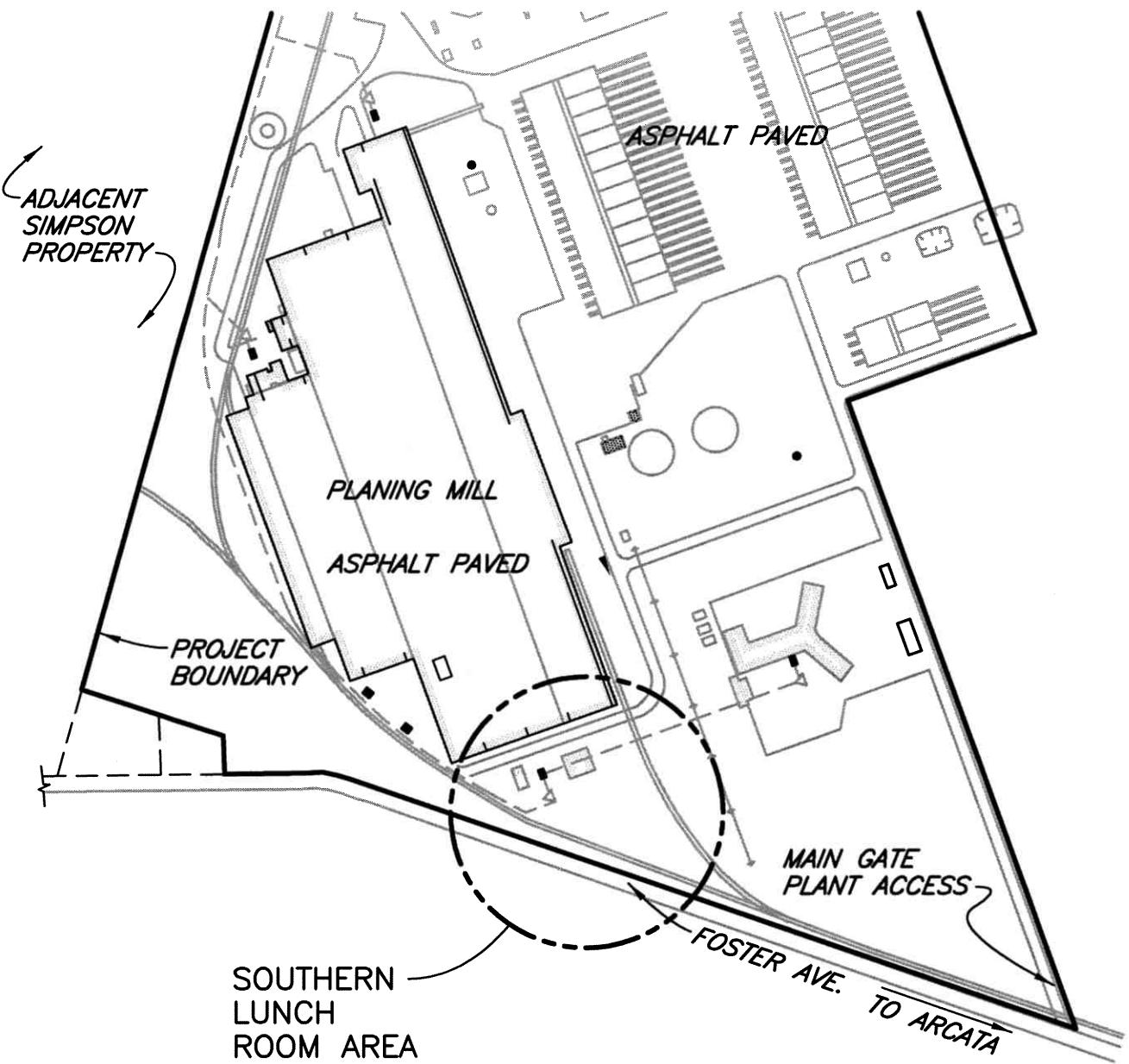
The site is located within the Arcata Bottoms, a floodplain/coastal plain of low relief. Geology in the vicinity of the site was mapped as Holocene alluvium consisting of coarse to fine sand and silt (Kelley, 1984). Gravel fill material was encountered from the ground surface to a depth of approximately 2 feet Below Ground Surface (BGS) underlain by 2 to 5 feet of silt (SHN, 2004). Sands and gravels are present below the silt from approximately 5 to 27 feet BGS. A deeper silt layer was observed at 27 feet BGS in well point SLR-1. Although no soil sample was collected below 28 feet BGS, the ease of advancement of the Geoprobe® rods from 28 to 59 feet BGS indicates that the silt layer extends to the bottom of the boring (approximately 59 feet BGS) (SHN, 2004).



SOURCE:  
U.S.G.S. QUADS OF  
ARCATA NORTH AND ARCATA SOUTH

NO SCALE

 Consulting Engineers & Geologists, Inc.	Simpson Timber Company Arcata Remanufacturing Facility Arcata, California	Site Location Map SHN 003154 March, 2006 003154-af-1 Figure 1
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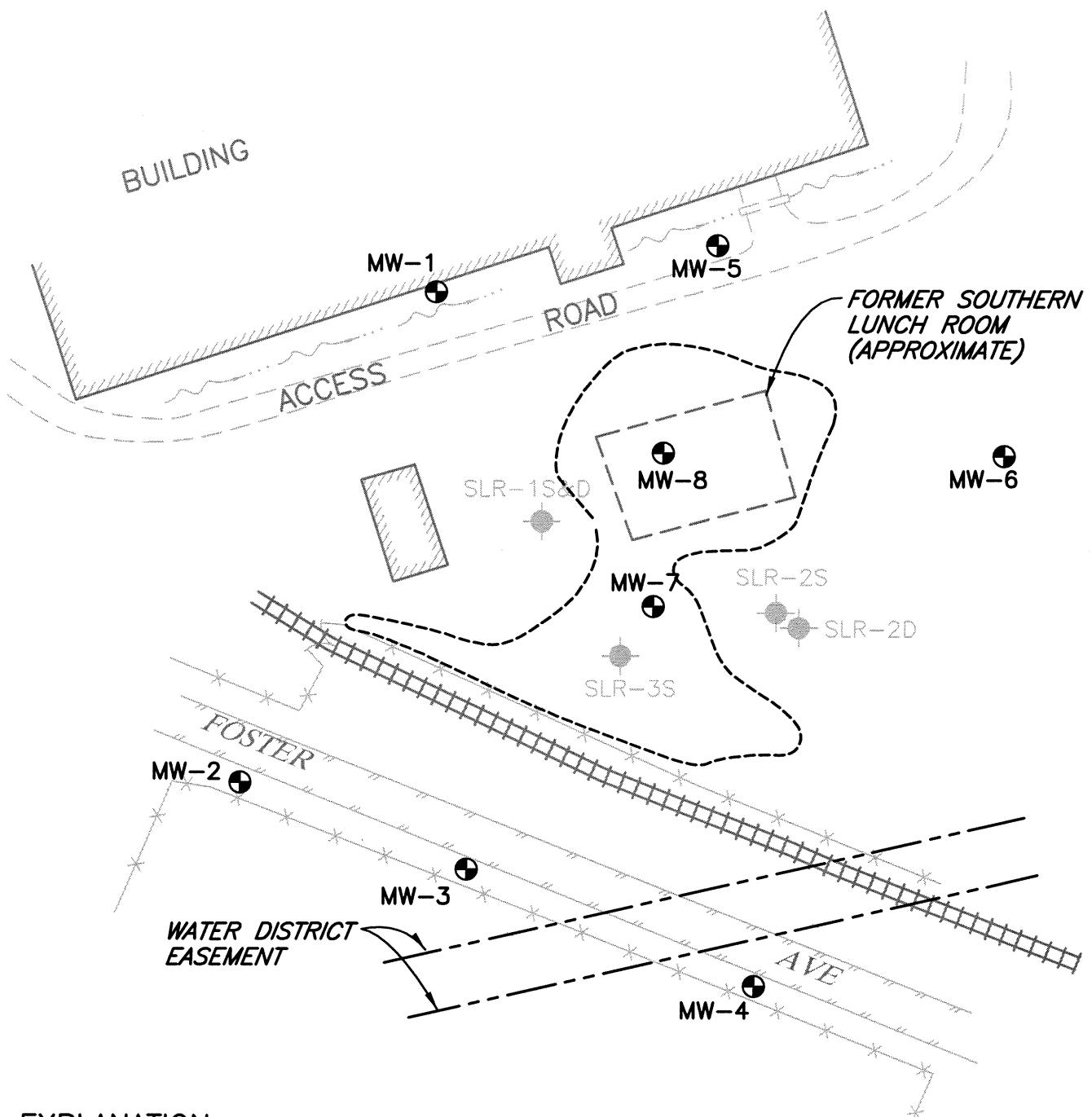


#### BASIS OF MAPPING

1. MARSH & McLENNAN, INC., SEATTLE INSURANCE BROKERS,  
NOVEMBER, 1964 SIMPSON TIMBER COMPANY, ARCATA, CALIFORNIA
2. CITY OF ARCATA, DEPARTMENT OF PUBLIC WORKS, HUMBOLDT COUNTY  
CALIFORNIA. 10-3-89 AERIAL PHOTO, RECTIFIED PHOTOMAP BY CH2M HILL,  
(38 & 39)

N  
1"=300'±

 Consulting Engineers & Geologists, Inc.	Simpson Timber Company Arcata Remanufacturing Facility Arcata, California	Former Site Layout		
		SHN 003154		
	March, 2006	003154-f2		Figure 2

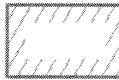


## EXPLANATION

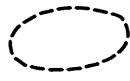
**MW-2 MONITORING WELL LOCATION AND DESIGNATION**



**SLR-1 SOIL BORING/WELL POINT LOCATION AND DESIGNATION (SHN, JANUARY, 2004 SITE INVESTIGATION)**

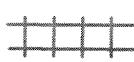


**EXISTING STRUCTURE**



**APPROXIMATE EXCAVATION EXTENTS**

**EXISTING FENCE**



**EXISTING RAILROAD TRACKS**



**EXISTING SURFACE DRAINAGE**



**S SHALLOW BORING**

**D DEEP BORING**



**1"=60'**

Previous subsurface investigations (EnviroNet, 1997) characterized the subsurface as approximately 3-15 feet of silt/clay deposits, underlain by sands and rounded gravels, with a low permeability layer of silt and/or clay present at depths ranging from approximately 23 to 30 feet BGS.

## 2.0 Field Activities

### 2.1 Monitoring Well Sampling

SHN conducted groundwater monitoring on February 9, 2006, as approved by the DTSC. As part of the monitoring program, wells MW-2, MW-3, MW-7, and MW-8 were purged and sampled. Prior to purging, each well (including MW-1, MW-4, and MW-5) was measured for depth to water, and checked for the presence of floating product (none was observed). Well MW-6 could not be located, and subsequently was not monitored. Electrical Conductivity, pH, and temperature were monitored periodically during purging activities using portable instrumentation. Each of the four wells to be sampled was also measured for Dissolved Oxygen (DO), Oxidation-Reduction Potential (ORP), and Dissolved Carbon Dioxide (DCO<sub>2</sub>) before purging. Groundwater samples were collected from wells MW-2, MW-3, MW-7, and MW-8 using disposable polyethylene bailers. A duplicate sample was collected from groundwater monitoring well MW-7 and analyzed for Volatile Organic Compounds (VOCs). The water samples were immediately placed in an ice-filled cooler, and submitted to the laboratory for analyses under appropriate chain-of-custody. Groundwater monitoring data sheets are included in Appendix A.

### 2.2 Laboratory Analysis

The groundwater samples collected on February 9, 2006 were analyzed for:

- VOCs, in general accordance with U.S. Environmental Protection Agency (EPA) Method No. 8260B;
- Pentachlorophenol (PCP) and Tetrachlorophenol (TCP), in general accordance with the Canadian Pulp Report Method;
- alkalinity, in general accordance with Standard Method 19th Edition 2320B;
- chloride, sulfate, and nitrate, in general accordance with EPA Method No. 300.0;
- dissolved iron and dissolved manganese, in general accordance with EPA Method No. 200.7; and
- phenols, in general accordance with EPA Method No. SW8270C.

All of the sample analyses (with the exception of phenols) were performed by North Coast Laboratories, Ltd., a California-certified analytical laboratory located in Arcata, California. The phenol analyses were performed by Severn Trent Laboratories, of Sacramento, California.

### 2.3 Equipment Decontamination Procedures

All monitoring and sampling equipment was cleaned prior to being transported to the Former Simpson Remanufacturing Facility site. All equipment that required on-site cleaning was initially washed in a water solution containing Liquinox® cleaner, followed by a distilled water rinse, then by a second distilled water rinse.

## **2.4 Investigation-Derived Waste Management**

All water utilized for decontaminating field-sampling equipment, and all well purge water was temporarily stored on site in 50-gallon plastic drums. The water was then transported to SHN's 1,000-gallon purge water storage tank located at 812 West Wabash Avenue in Eureka, California. Approximately 43 gallons of decontamination and purge water from the February 9, 2006, sampling events are being stored at SHN, and will be tested and discharged, under permit, to the City of Eureka municipal sewer system. A discharge receipt will be included in the next quarterly groundwater-monitoring report. A discharge receipt for the 44 gallons of purge/decontamination water generated during the fourth quarter 2005 monitoring event is included in Appendix A.

## **3.0 Groundwater Monitoring Results**

### **3.1 Hydrogeology**

SHN measured depth-to-groundwater in the existing monitoring wells during the first quarter 2006, monitoring event (Table 1).

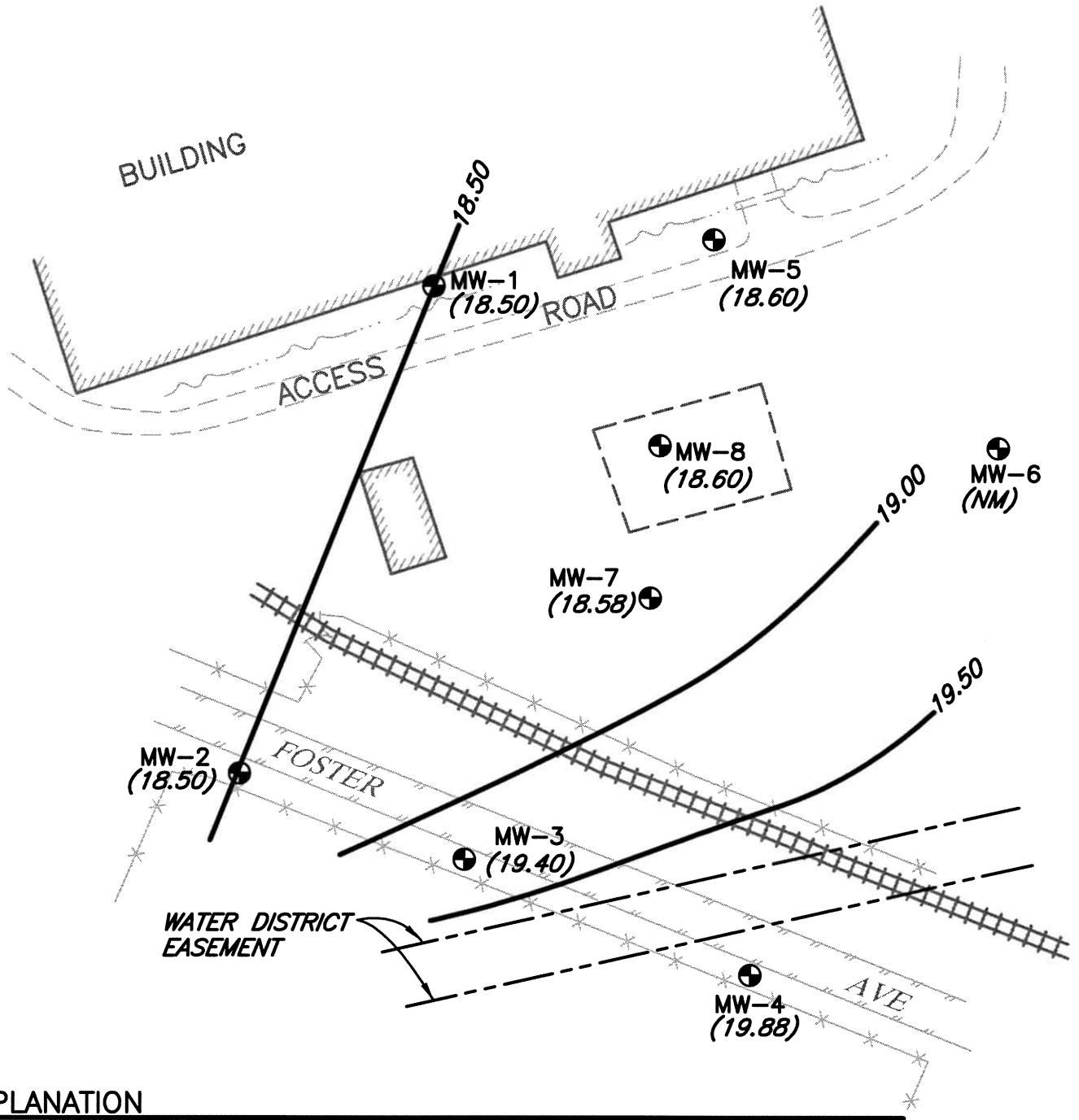
<b>Table 1</b> <b>Groundwater Elevations, February 9, 2006</b> <b>Former Simpson Remanufacturing Facility, Arcata, California</b>			
<b>Sample Location</b>	<b>Top of Casing Elevation<sup>1</sup> (feet)</b>	<b>Depth to Groundwater<sup>2</sup> (feet)</b>	<b>Groundwater Elevation<sup>1</sup> (feet)</b>
MW-1	20.69	2.19	18.50
MW-2	22.10	3.60	18.50
MW-3	22.85	3.45	19.40
MW-4	22.48	2.60	19.88
MW-5	21.82	3.22	18.60
MW-6	23.03	Could not locate well	
MW-7	21.48	2.90	18.58
MW-8	21.56	2.96	18.60

1. Relative to National Geodetic Vertical Datum 1929  
2. Below top of casing

On February 9, 2006, the direction of groundwater flow beneath the site was to the northwest, with an approximate gradient of 0.0091 (using wells MW-2, 3, 4, and 7). A groundwater contour map for the February 9, 2006, monitoring event is presented as Figure 4. Historic groundwater-elevation data is included in Appendix B, Table B-1.

### **3.2 Groundwater Analytical Results**

Table 2 summarizes the laboratory analytical results for VOC analysis.



## EXPLANATION

**MW-2 MONITORING WELL  
LOCATION AND DESIGNATION**

**(19.40) GROUNDWATER ELEVATION  
IN FEET NGVD 29**

**—19.50— GROUNDWATER CONTOUR  
IN FEET NGVD 29**

**(NM) NOT MEASURED**

1"=60'

**Table 2**  
**Volatile Organic Compounds--Groundwater Analytical Results, February 9, 2006**  
**Former Simpson Remanufacturing Facility, Arcata, California**  
**(in ug/L)<sup>1</sup>**

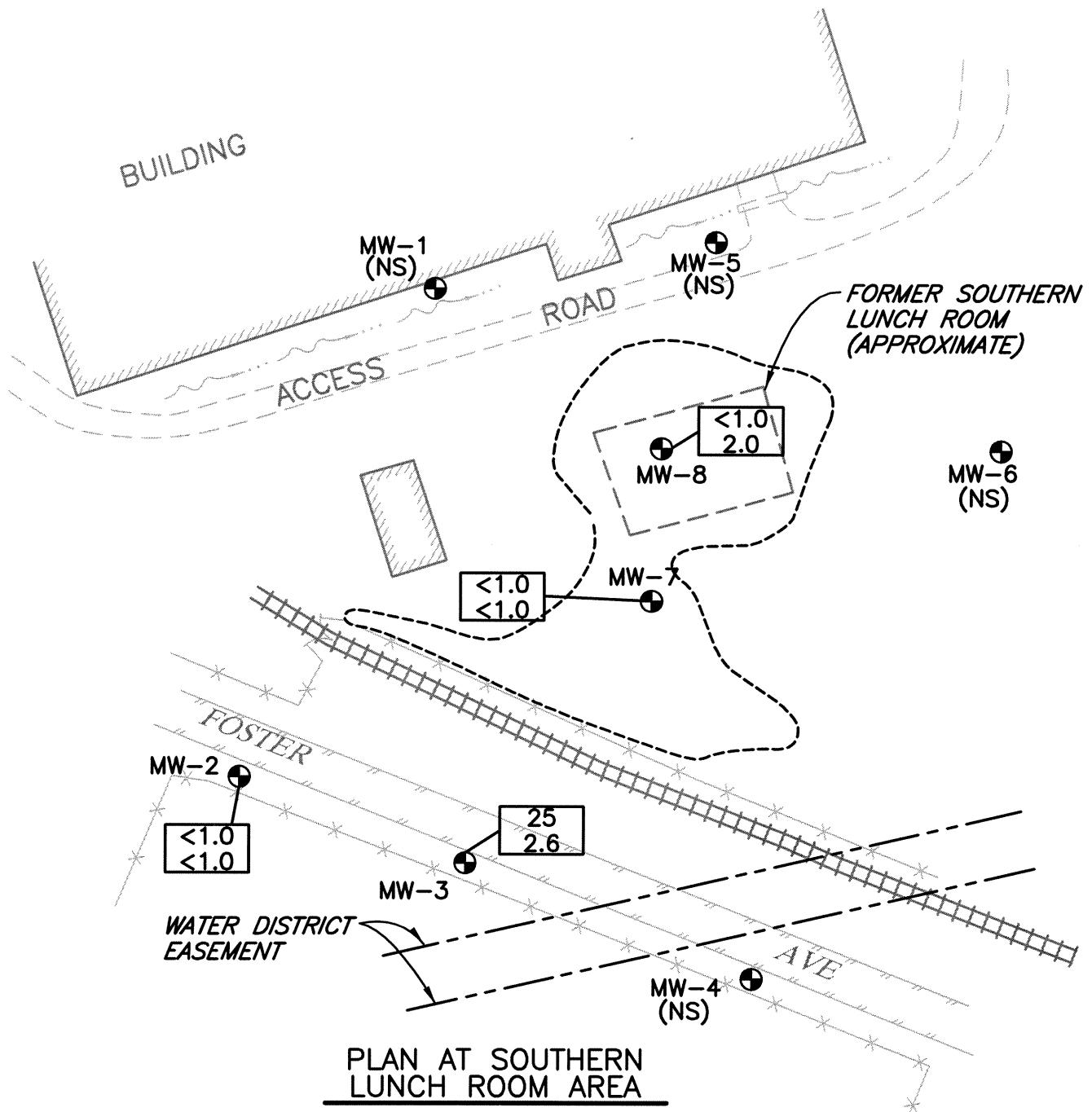
Sample Location	Phenols <sup>2</sup>	PCP <sup>3</sup>	TCP <sup>3</sup>	trans-1,2-DCE <sup>4</sup>	cis-1,2-DCE <sup>4</sup>	Vinyl Chloride <sup>4</sup>	Benzene <sup>4</sup>	Total Xylenes <sup>4</sup>
MW-2	ND <sup>5</sup>	<0.30 <sup>6</sup>	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50
MW-3	ND	<0.30	<1.0	<1.0	25	2.6	0.58	<0.50
MW-7	ND	<0.30	<1.0	<1.0	<1.0	<1.0	0.66	<0.50
Dup-1 <sup>7</sup>	ND	<0.30	<1.0	<1.0	<1.0	1.1	0.76	<0.50
MW-8	ND	<0.30	<1.0	<1.0	<1.0	2.0	<0.50	0.72

1. ug/L: micrograms per Liter  
 2. Analyzed in general accordance with U.S. Environmental Protection Agency (EPA) Method No. SW8270C.  
 3. Pentachlorophenol (PCP) and tetrachlorophenol (TCP), analyzed in general accordance with the Canadian Pulp Report Method.  
 4. DCE: Dichloroethene, vinyl chloride, benzene, and total xylenes, analyzed in general accordance with EPA Method Nos. 5030B/8260B.  
 5. ND: Not Detected. See laboratory analytical report for constituent list and corresponding method detection limits.  
 6. <: Denotes a value that is "less than" the method detection limit.  
 7. Duplicate groundwater sample collected from monitoring well MW-7.

Appendix C presents the complete analytical laboratory reports, chain-of-custody, and laboratory quality control data. Figure 5 shows selected VOC concentrations in groundwater on February 9, 2006, and historic groundwater analytical data are included in Appendix B, Table B-2.

### 3.3 Natural Attenuation Parameters

Table 3 summarizes the analytical results of select inorganic constituents used to assess whether or not reductive de-chlorination of organic compounds is occurring.



## EXPLANATION

**MW-2 MONITORING WELL  
LOCATION AND DESIGNATION**

**<1.0 CIS-1,2 DICHLOROETHENE  
<1.0 VINYL CHLORIDE** RESULTS IN ug/L

----- APPROXIMATE LIMITS OF EXCAVATION

(NS) NOT SAMPLED

1" = 60'

**Table 3**  
**Reductive De-chlorination Indicator Results, February 9, 2006**  
**Former Simpson Remanufacturing Facility, Arcata, California**

Sample Location	Alkalinity <sup>1</sup> (mg/L <sup>(2)</sup> as CaCO <sub>3</sub> <sup>(3)</sup> )	Chloride <sup>4</sup> (mg/L)	Sulfate <sup>4</sup> (mg/L)	Nitrate <sup>4</sup> (mg/L)	Dissolved Iron <sup>5</sup> (ug/L) <sup>6</sup>	Dissolved Manganese <sup>5</sup> (ug/L)
MW-2	62	4.6	7.8	4.7	<100 <sup>7</sup>	<2.0
MW-3	130	10	0.57	<0.10	470	580
MW-7	160	8.7	7.0	<0.10	2,500	730
MW-8	210	16	<0.50	<0.10	14,000	1,800
Dup	170	8.5	8.2	<0.10	3,300	680

- Analyzed in general accordance with Standard Method 19<sup>th</sup> Edition 2320B
- mg/L: milligrams per Liter
- CaCO<sub>3</sub>: Calcium Carbonate
- Analyzed in general accordance with U.S. Environmental Protection Agency (EPA) Method No. 300.0
- Analyzed in general accordance with EPA Method No. 200.7
- ug/L: micrograms per Liter.
- <: Denotes a value that is "less than" the method detection limit.

When reductive de-chlorination is occurring, alkalinity, chloride, dissolved iron, and dissolved manganese concentrations typically increase within the source plume, while sulfate and nitrate concentrations typically decrease. Monitoring wells MW-7 and MW-8 are considered representative of the source area. Well MW-2 is considered representative of conditions outside of the contaminant plume. As shown in Table 3, these trends were followed for all constituents.

DO, DCO<sub>2</sub>, and ORP were measured in monitoring wells MW-2, MW-3, MW-7, and MW-8 on February 9, 2006, prior to sampling, and are summarized in Table 4.

**Table 4**  
**DO, DCO<sub>2</sub>, and ORP, Measurement Results, February 9, 2006**  
**Former Simpson Remanufacturing Facility, Arcata, California**

Sample Location	DO <sup>1</sup> (ppm) <sup>2</sup>	DCO <sub>2</sub> <sup>3</sup> (ppm)	ORP <sup>4</sup> (mV) <sup>5</sup>
MW-2	7.99	40	110
MW-3	2.63	45	-13
MW-7	2.69	175	-42
MW-8	2.58	400	-61

- DO: Dissolved Oxygen, field measured using portable instrumentation.
- ppm: Measurement concentration, in parts per million.
- DCO<sub>2</sub>: Dissolved Carbon Dioxide, measured using a field test kit.
- ORP: Oxidation-Reduction Potential measured using portable instrumentation.
- mV: millivolts

Current DO concentrations may be sufficient to support aerobic biodegradation. DCO<sub>2</sub> levels within the source area wells MW-8 and MW-7 are greater than background levels in well MW-2,

indicating that biodegradation is occurring. ORP concentrations are representative of reducing to mildly oxidizing conditions. Historic DO, DCO<sub>2</sub>, and ORP measurement results are presented in Appendix B, Table B-3.

An analysis of degradation indicators shows that both aerobic degradation and reductive de-chlorination is occurring. Depleted DO concentrations across the site along with increased DCO<sub>2</sub> concentrations within the source area indicate that conditions within the source area are becoming anaerobic. The trends of the reductive de-chlorination indicators in the source area along with the continued presence of vinyl chloride in wells MW-3, MW-7, and MW-8 indicate that chlorinated compounds are degrading.

### **3.4 Quality Assurance**

Precision goals outlined in the quality assurance project plan appended in the site investigation work plan (SHN, 2003), were reviewed with respect to the duplicate sample collected from monitoring well MW-7. Vinyl chloride and benzene concentrations in the duplicate sample from MW-7 were within the precision goals. No other VOC constituents could be compared because all were below their respective laboratory method reporting limits.

## **4.0 Discussion and Recommendations**

Groundwater data indicates that a very shallow groundwater gradient exists at the site, and when comparing this data to previous site data, shows that there is some variation in the direction of groundwater flow. However, the predominant direction of groundwater flow is in a southerly direction. VOCs, including cis-1, 2-DCE, and vinyl chloride continue to be present at low concentrations in well MW-3.

The presence of vinyl chloride (a decay product of VOCs, including cis-1,2-DCE) in site wells indicates that VOC biodegradation is occurring. In addition, reductive de-chlorination indicators show that VOC degradation is occurring.

In the work plan, *Amended Subsurface Investigation, Monitoring Well Installation, and Groundwater Monitoring Work Plan*, dated November 2003, SHN recommended that groundwater monitoring be conducted for a period of one year upon completion of wells MW-7 and MW-8. This work plan was approved by the DTSC and the RWQCB in December 2003. In November 2004, the approved one year of quarterly monitoring was completed.

On March 15, 2005, SHN submitted a five-year review report to the DTSC, presenting the results of work conducted at the site in 2004, along with a summary of the work completed over the past five years. In a letter dated July 6, 2005, the DTSC concurred with the recommendation presented in the five-year review report. Therefore, in accordance with the site recommendations, SHN will continue quarterly monitoring until July 2006, at which time, recommendations for the site will be made. The next monitoring event is scheduled for April 2006.

## **5.0 References Cited**

Kelley, Frederic. (1984). *Geology and Geomorphic Features Related to Landsliding, Arcata North 7.5-minute quadrangle, Humboldt County, California*. NR: CDMG.

Pacific Northwest EnviroNet Group, Inc. (1997). *Final Removal Action Work Plan Prepared for the Former Simpson Timber Company Remanufacturing Plant Site*. Santa Rosa: EnviroNet.

SHN Consulting Engineers & Geologists, Inc. (2003). *Amended Subsurface Investigation, Monitoring Well Installation, and Groundwater Monitoring Work Plan, Former Simpson Remanufacturing Plant, Arcata, California*. Eureka: SHN.

---. (2004). *Report of Findings and First Quarter 2004 Groundwater Monitoring Report, Former Simpson Remanufacturing Facility, Arcata, California*. Eureka: SHN.

---

**Appendix A**

**Field Notes / Discharge Receipt**



# CONSULTING ENGINEERS & GEOLOGISTS, INC.

480 Hemsted Drive • Redding, CA 96002 • Tel: 530.221.5424 • FAX: 530.221.0135 • E-mail: shninfo@shn-redding.com  
 812 W. Wabash • Eureka, CA 95501 • Tel: 707.441.8855 • FAX: 707.441.8877 • E-mail: shninfo@shn-enr.com

## DAILY FIELD REPORT

JOB NO  
003154

Page of

DAILY FIELD REPORT SEQUENCE NO

DATE  
2/9/06 DAY OF WEEK  
Thur.

PROJECT ENGINEER/ SUPERVISOR  
Frans Lewman / Robert Reuber  
TECHNICIAN

PROJECT NAME <u>Simpson Reman Facility</u>	CLIENT/OWNER <u>Simpson Reman Company</u>	
GENERAL LOCATION OF WORK <u>Arcata CA.</u>	OWNER/CLIENT REPRESENTATIVE <u>Rob Ricci</u>	
TYPE OF WORK <u>Sampling</u>	WEATHER <u>Sun</u>	
SOURCE & DESCRIPTION OF FILL MATERIAL	KEY PERSONS CONTACTED	

### DESCRIBE EQUIPMENT USED FOR HAULING, SPREADING, WATERING, CONDITIONING, & COMPACTING

- 0955 On site. Open up wells, taking water levels and DO readings.  
 1145 Purging MW-2 with a disposable bailer. All purge water was caught in 5 gal. buckets.  
 1315 Sampled MW-2 with its bailer. Lock up well. MW-2  
 1233 Purging MW-3 with a disposable bailer. All purge water was caught in 5 gal. buckets.  
 1310 Sampled MW-3 with its bailer. Locked up well. MW-3  
 1420 Purging MW-7 with a disposable bailer. All purge water was caught in 5 gal. buckets.  
 1455 Sampled MW-7 with its bailer. Did Dug sample on MW-7. Lock up well. MW-7  
 1515 Purging MW-8 with a disposable bailer. All purge water was caught in 5 gal. buckets.  
 1550 Sampled MW-8 with its bailer. Lock up well. MW-8  
 1600 Clean and loaded up.  
 1610 Off site. Note: All purge and decon water was transported to SHN's P.W.S.T. located at 812 W Wabash Ave. Eureka CA. 43 gal. Total.

	Purge	Sampled
MW-1	ND	ND
MW-2	Yes	Yes
MW-3	Yes	Yes
MW-4	NO	ND
MW-5	NO	NO
MW-6	NO	NO
MW-7	Yes	Yes also, Dug on this well
MW-8	Yes	Yes



**CONSULTING ENGINEERS & GEOLOGISTS, INC.**

812 W. Wabash • Eureka, CA 95501-2138 • 707/441-8855 • FAX: 707/441-8877 • shninfo@shn-enr.com

## EQUIPMENT CALIBRATION SHEET

Name:	<u>Dustin Tibbets</u>			
Project Name:	<u>Simpson Reman Facility</u>			
Reference No.:	<u>003154</u>			
Date:	<u>2/9/06</u>			
Equipment:	<input checked="" type="checkbox"/> pH & EC <input type="checkbox"/> PID <input type="checkbox"/> GTCO <sub>2</sub> <input type="checkbox"/> GTTEL <input type="checkbox"/> Turbidity <input checked="" type="checkbox"/> Other <u>Dissolved Oxygen Meter</u>			

### Description of Calibration Procedure and Results:

pH + EC meter calibrated using a 2 buffer method  
with a pH 7.00 and 4.01, meter was set exactly to  
7.00 and 4.01 and conductivity was set at 700 umhos.

DO meter is self calibrating, with the  
Altimeter set at 0



# CONSULTING ENGINEERS & GEOLOGISTS, INC.

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## Groundwater Elevations

### Water Sampling Data Sheet

Project Name:	<u>Simpson Reman Facility</u>	Date/Time:	<u>2/8/06</u>
Project No.:	<u>003154</u>	Sampler Name:	<u>Dustin Tibbets</u>
Location:	<u>Arcata Ca.</u>	Sample Type:	<u>Water</u>
Well #:	<u>MW-2</u>	Weather	<u>Clear</u>
Hydrocarbon Thickness/Depth (feet):		Key Needed:	<u>Dolphin</u>

$$\begin{array}{ccccccccc}
 \text{Total Well Depth} & \text{Initial Depth to} & = & \text{Height of Water} & \times & 0.163 \text{ gal/ft (2-inch well)} / \\
 (\text{feet}) & \text{Water (feet)} & & \text{Column (feet)} & & 0.653 \text{ gal/ft (4-inch well)} & = & 1 \text{ Casing Volume} \\
 \boxed{25.10} & - \boxed{3.60} & = & \boxed{21.50} & \times & \boxed{.163} & = & \boxed{3.44 \times 3 = 10.32}
 \end{array}$$

Time	DO (ppm)	CO <sub>2</sub> (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
1034	7.99						0 gal.	
1147	40	110					.25 gal.	
1151			125	59.5°	6.10		3.5 gal.	
1158	No flow		122	58.4°	6.03		7 gal.	
1204	Hour cell		124	58.6°	6.11		10.5 gal	

Purge Method: Boiler

Total Volume Removed: 10.5 (gal)

#### Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-2	3	HCl	NCL	8260 list 9
	1			PCP/TCP Can Pulp
	1			8270 Phenols
	1		✓	Dis Fe + Manganese NO <sub>3</sub> , SO <sub>4</sub> , AK, Chloride

Well Condition:

Remarks:

Recharge to 360 at sample time. - 12/15



# **CONSULTING ENGINEERS & GEOLOGISTS, INC.**

812 W. Wabash • Eureka, CA 95501-2138 • 707/441-8855 • FAX: 707/441-8877 • shninfo@shn-enqr.com

## Water Sampling Data Sheet

Project Name:	Simpson Reman Facility	Date/Time:	2/9/08
Project No.:	003154	Sampler Name:	Dustin Tibbets
Location:	Accata Co.	Sample Type:	Water
Well #:	MW-3	Weather	Clear
Hydrocarbon Thickness/Depth (feet):		Key Needed:	Dolphin

$$\begin{array}{l} \text{Total Well Depth} \\ \text{(feet)} \end{array} - \begin{array}{l} \text{Initial Depth to} \\ \text{Water (feet)} \end{array} = \begin{array}{l} \text{Height of Water} \\ \text{Column (feet)} \end{array} \times \begin{array}{l} 0.163 \text{ gal/ft (2-inch well) /} \\ 0.653 \text{ gal/ft (4-inch well)} \end{array} = \begin{array}{l} 1 \text{ Casing Volume} \\ \text{(gal)} \end{array}$$

25.25	-	3.45	=	21.80	×	.163	=	3.49 x 3 = 10.46
-------	---	------	---	-------	---	------	---	------------------

## Purge Method:

Total Volume Removed: 10.5 (gal)

## Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-3	3	HCC	NCL	8260 1st 9
	1			PCP/TCP can Pulp
	1			8270 Phenols
	1			Dis Fe + Manganese
	1			

#### **Well Condition:**

**Remarks:**

Recharge to 3.45 at sample time. - 13/10



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### Water Sampling Data Sheet

Project Name:	<u>Simpson Reman Facility</u>	Date/Time:	<u>2/8/06</u>
Project No.:	<u>003154</u>	Sampler Name:	<u>Dustin Tibbets</u>
Location:	<u>Arcata Ca.</u>	Sample Type:	<u>Water</u>
Well #:	<u>MW-7</u>	Weather	<u>Clear</u>
Hydrocarbon Thickness/Depth (feet):		Key Needed:	<u>Dolphin</u>

$$\begin{array}{l} \text{Total Well Depth} \\ \text{(feet)} \end{array} - \begin{array}{l} \text{Initial Depth to} \\ \text{Water (feet)} \end{array} = \begin{array}{l} \text{Height of Water} \\ \text{Column (feet)} \end{array} \times \begin{array}{l} 0.163 \text{ gal/ft (2-inch well) /} \\ 0.653 \text{ gal/ft (4-inch well)} \end{array} = \begin{array}{l} \text{1 Casing Volume} \\ \text{(gal)} \end{array}$$

<u>24.05</u>	-	<u>2.90</u>	=	<u>21.15</u>	$\times$	<u>.163</u>	=	<u>3.38 \times 3 = 10.15</u>
--------------	---	-------------	---	--------------	----------	-------------	---	------------------------------

Time	DO (ppm)	CO <sub>2</sub> (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
1408	<u>2.69</u>							O gal.
1424		<u>17.5</u>	<u>-42</u>					<u>.25 gal.</u>
1428				<u>345</u>	<u>59.1°</u>	<u>6.22</u>		<u>3.5 gal.</u>
1434	<u>No flow</u>			<u>328</u>	<u>58.7°</u>	<u>6.28</u>		<u>2 gal.</u>
1439	<u>other cell</u>			<u>331</u>	<u>59°</u>	<u>6.32</u>		<u>10.25 gal.</u>

Purge Method: Builer

Total Volume Removed: 10.25 (gal)

### Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-7	3	HCL	NCL	8260 1.3 + 9
	T			PCP/TCP com Pulp
	1			B220 Phenols
	1			Dis Fe, & Manganese
	1			Mo, Sb, Alk, Chloride

Well Condition:

Remarks: Did Drip sample on MW-7  
Recharge to 2.79 at sample time. - 1455

### Water Sampling Data Sheet

Project Name:	<u>Simpson Reman Facility</u>	Date/Time:	<u>2/9/06</u>
Project No.:	<u>003154</u>	Sampler Name:	<u>Dustin Tibbets</u>
Location:	<u>Arcata Ca.</u>	Sample Type:	<u>Water</u>
Well #:	<u>MW-8</u>	Weather	<u>Clear</u>
Hydrocarbon Thickness/Depth (feet):		Key Needed: <u>Dolphin</u>	

$$\text{Total Well Depth (feet)} - \text{Initial Depth to Water (feet)} = \text{Height of Water Column (feet)} \times \frac{0.163 \text{ gal/ft (2-inch well) /} \\ 0.653 \text{ gal/ft (4-inch well)}}{=} \text{1 Casing Volume (gal)}$$

$$\boxed{24.08} - \boxed{2.96} = \boxed{21.12} \times \boxed{.163} = \boxed{3.38 \times 3 = 10.14}$$

Time	DO (ppm)	CO <sub>2</sub> (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
1414	2.58						0 gal.	
1520		400	-61				.25 gal.	
1524				575	60.8°	6.19	3.5 gal.	
1531	No flow			483	61.2°	6.26	> gal.	
1535	thru cell			480	61.1°	6.28	10.25 gal	

 Purge Method: Bailer

 Total Volume Removed: 10.25 (gal)

#### Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-8	3	HCL	NCL	8260 list 9
	1			PCP/TCP can Pulp
	1			8270 Phenols
	1			Dis Fe + Manganese
	1			NO <sub>3</sub> , SO <sub>4</sub> , Alk., chloride

Well Condition:

Remarks:

Recharge to 2.99 at sample time. - 1550

Client Name:

**SIMPSON ARCATA REMAN**

The water from your site:

**3315 FOSTER AVENUE, ARCATA, CA**

SHN ref #

**003154**

Collected On: **10/24/2005**

Has been tested and certified as acceptable to be discharged into the City of Eureka municipal sewer system.

Amount Discharged:

**44 GALLONS**

Date Discharged:

**12/19/05**

Certified by:

**AARON MELODY**

**SHN CONSULTING ENGINEERS & GEOLOGISTS, INC.**

City of Eureka Wastewater Discharge Permit #65

---

**Appendix B**  
**Historic Monitoring Data**

**Table B-1**  
**Historic Groundwater Elevations**  
**Former Simpson Remanufacturing Facility, Arcata, California**

Sample Location	Sampling Date	Top of Casing Elevation (feet) <sup>1</sup>	Depth to Water (feet) <sup>2</sup>	Groundwater Elevation (feet) <sup>3</sup>
MW-1	2/5/04	20.69	3.13	17.56
	5/19/04		4.37	16.32
	8/30/04		8.59	12.10
	11/9/04		8.93	11.76
	7/20/05		4.73	15.96
	10/24/05		7.90	12.79
	2/9/06		2.19	18.50
MW-2	2/5/04	22.10	4.53	17.57
	5/19/04		5.80	16.30
	8/30/04		9.96	12.14
	11/9/04		10.36	11.74
	7/20/05		6.15	15.95
	10/24/05		9.28	12.82
	2/9/06		3.60	18.50
MW-3	2/5/04	22.85	5.04	17.81
	5/19/04		6.94	15.91
	8/30/04		11.40	11.45
	11/9/04		12.14	10.71
	7/20/05		7.23	15.62
	10/24/05		10.62	12.23
	2/9/06		3.45	19.40
MW-4	2/5/04	22.48	4.57	17.91
	5/19/04		6.71	15.77
	8/30/04		11.16	11.32
	11/9/04		11.96	10.52
	7/20/05		6.95	15.53
	10/24/05		10.33	12.15
	2/9/06		2.60	19.88
MW-5	2/5/04	21.82	4.20	17.62
	5/19/04		5.47	16.35
	8/30/04		9.73	12.09
	11/9/04		10.02	11.80
	7/20/05		5.81	16.01
	10/24/05		9.03	12.79
	2/9/06		3.22	18.60
MW-6	2/5/04	23.03	5.13	17.90
	5/19/04		7.09	15.94
	8/30/04		11.59	11.44
	11/9/04		12.31	10.72
	7/20/05		7.37	15.66
	10/24/05		10.78	12.25
	2/9/06		Not able to locate well	

**Table B-1**  
**Historic Groundwater Elevations**  
**Former Simpson Remanufacturing Facility, Arcata, California**

Sample Location	Sampling Date	Top of Casing Elevation (feet) <sup>1</sup>	Depth to Water (feet) <sup>2</sup>	Groundwater Elevation (feet) <sup>3</sup>
MW-7	2/5/04	21.48	3.84	17.64
	5/19/04		5.19	16.29
	8/30/04		9.42	12.06
	11/9/04		9.81	11.67
	7/20/05		5.52	15.96
	10/24/05		8.73	12.75
	2/9/06		2.90	18.58
MW-8	2/5/04	21.56	3.94	17.62
	5/19/04		5.24	16.32
	8/30/04		9.47	12.09
	11/9/04		9.79	11.77
	7/20/05		5.58	15.98
	10/24/05		8.78	12.78
	2/9/06		2.96	18.60

1. Relative to National Geodetic Vertical Datum 1929

2. Below top of casing

**Table B-2**  
**Historic Groundwater Analytical Results**  
**Former Simpson Remanufacturing Facility, Arcata, California**  
(in  $\mu\text{g/L}$ )<sup>1</sup>

Sample Location	Sample Date	Phenols <sup>2</sup>	PCP <sup>3</sup>	TCP <sup>3</sup>	trans-1,2-DCE <sup>4</sup>	cis-1,2-DCE	Vinyl Chloride	Benzene	Total Xylenes
MW-1	2/5/04	ND <sup>5</sup>	<0.30 <sup>6</sup>	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50
	5/19/04								
MW-2	2/5/04	ND	<0.30	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50
	5/19/04	NS <sup>7</sup>	NS	NS	NS	NS	NS	NS	NS
	8/30/04	ND	<b>0.58</b>	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50
	11/9/04	ND	<0.30	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0
	7/20/05	NA <sup>8</sup>	<0.30	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50
	8/1/05	ND	NA	NA	NA	NA	NA	NA	NA
	10/24/05	ND	<0.30	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50
	2/9/06	ND	<0.30	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50
MW-3	2/5/04	ND	<0.30	<1.0	<1.0	<b>14</b>	<b>1.6</b>	<0.50	<0.50
	5/19/04	ND	<0.30	<1.0	<1.0	<b>19</b>	<b>2.4</b>	<b>0.70</b>	<0.50
	8/30/04	ND	<0.30	<1.0	<1.0	<b>30</b>	<b>2.8</b>	<b>0.66</b>	<0.50
	11/9/04	ND	<0.30	<1.0	<b>2.0</b>	<b>24</b>	<b>1.7</b>	<b>0.82</b>	<1.0
	7/20/05	NA	<0.30	<1.0	<1.0	<b>15</b>	<b>1.7</b>	<0.50	<0.50
	8/1/05	ND	NA	NA	NA	NA	NA	NA	NA
	10/24/05	ND	<0.30	<1.0	<1.0	<b>12</b>	<b>1.1</b>	<0.50	<0.50
	2/9/06	ND	<0.30	<1.0	<1.0	<b>25</b>	<b>2.6</b>	<b>0.58</b>	<0.50
MW-4	2/5/04	ND	<0.30	<1.0	<1.0	<b>1.5</b>	<1.0	<0.50	<0.50
	5/19/04								
MW-5	2/5/04	ND	<0.30	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50
	5/19/04								
MW-6	2/5/04	ND	<0.30	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50
	5/19/04								

**Table B-2**  
**Historic Groundwater Analytical Results**  
**Former Simpson Remanufacturing Facility, Arcata, California**  
(in µg/L)<sup>1</sup>

Sample Location	Sample Date	Phenols <sup>2</sup>	PCP <sup>3</sup>	TCP <sup>3</sup>	trans-1,2-DCE <sup>4</sup>	cis-1,2-DCE	Vinyl Chloride	Benzene	Total Xylenes
MW-7	2/5/04	ND	<0.30	<1.0	<1.0	4.2	77	2.6	<0.50
	5/19/04	ND	<0.30	<1.0	<1.0	3.8	64	2.8	<0.50
	8/30/04	ND	<0.30	<1.0	<1.0	1.7	29	2.5	<0.50
	11/9/04	ND	<0.30	<1.0	<1.0	1.2	8.9	2.5	<1.0
	7/20/05	NA	<0.30	<1.0	<1.0	<1.0	6.6	2.0	<0.50
	8/1/05	ND	NA	NA	NA	NA	NA	NA	NA
	10/24/05	ND	<0.30	<1.0	<1.0	<1.0	3.9	1.8	<0.50
	2/9/06	ND	<0.30	<1.0	<1.0	<1.0	<1.0	0.66	<0.50
MW-8	2/5/04	ND	<0.30	<1.0	<1.0	<1.0	6.6	<0.50	0.70
	5/19/04	ND	<0.30	<1.0	<1.0	<1.0	3.4	<0.50	0.99
	8/30/04	ND	<b>0.52</b>	<1.0	<1.0	<1.0	2.4	<0.50	<0.50
	11/9/04	ND	<0.30	<1.0	<1.0	<1.0	2.6	<0.50	<1.0
	7/20/05	NA	<0.30	<1.0	<1.0	<1.0	4.1	<0.50	<0.50
	8/1/05	ND	NA	NA	NA	NA	NA	NA	NA
	10/24/05	ND	<0.30	<1.0	<1.0	<1.0	<b>5.4</b>	<0.50	<0.50
	2/9/06	ND	<0.30	<1.0	<1.0	<1.0	2.0	<0.50	<b>0.72</b>

1. µg/L: micrograms per Liter

2. Analyzed in general accordance with U.S. Environmental Protection Agency (EPA) Method No. 8270

3. Pentachlorophenol (PCP) and Tetrachlorophenol (TCP), analyzed in general accordance with the Canadian Pulp Report Method

4. DCE: Dichloroethene

5. ND: Not Detected. See laboratory analytical reports for individual constituents and detection limits.

6. <: Denotes a value that is "less than" laboratory method detection limit.

7. NS: Not Sampled

8. NA: Not Analyzed

**Table B-3**  
**Historic Biodegradation Indicator Measurement Results**  
**Former Simpson Remanufacturing Facility, Arcata, California**

Sample Location	Sample Date	DO <sup>1</sup> (ppm) <sup>2</sup>	DCO <sub>2</sub> <sup>3</sup> (ppm)	ORP <sup>4</sup> (mV) <sup>5</sup>
MW-1	2/5/04	1.34	100	301
	5/19/04	Groundwater sampling of this well no longer required.		
MW-2	2/5/04	9.89	25	296
	5/19/04	NM <sup>6</sup>	NM	NM
	8/30/04	0.48	40	2
	11/9/04	0.82	30	105
	7/20/05	0.46	30	184
	10/24/05	1.07	30	88
	2/9/06	7.99	40	110
MW-3	2/5/04	5.98	30	-116
	5/19/04	0.74	35	130
	8/30/04	0.43	60	-32
	11/9/04	0.69	35	66
	7/20/05	0.48	30	186
	10/24/05	1.02	30	-60
	2/9/06	2.63	45	-13
MW-4	2/5/04	5.63	50	298
	5/19/04	Groundwater sampling of this well no longer required.		
MW-5	2/5/04	1.37	80	323
	5/19/04	Groundwater sampling of this well no longer required.		
MW-6	2/5/04	3.36	70	332
	5/19/04	Groundwater sampling of this well no longer required.		
MW-7	2/5/04	1.29	120	245
	5/19/04	0.51	90	34
	8/30/04	0.45	100	49
	11/9/04	0.70	110	94
	7/20/05	0.44	150	33
	10/24/05	1.05	50	54
	2/9/06	2.69	175	-42
MW-8	2/5/04	1.33	120	219
	5/19/04	0.78	600	-31
	8/30/04	0.52	400	43
	11/9/04	0.72	350	30
	7/20/05	0.49	500	-18
	10/24/05	1.02	250	-51
	2/9/06	2.58	400	-61

1. DO: Dissolved Oxygen; field measured using portable instrumentation
2. ppm: parts per million
3. DCO<sub>2</sub>: Dissolved Carbon Dioxide; ; field measured using portable instrumentation
4. ORP: Oxidation-Reduction Potential
5. mV: millivolts
6. NM: Not Measured

---

**Appendix C**  
**Laboratory Analytical Reports**

**STL Sacramento**  
880 Riverside Parkway  
West Sacramento, CA 95605

Tel: 916 373 5600 Fax: 916 372 1059  
[www.stl-inc.com](http://www.stl-inc.com)

February 26, 2006

**STL SACRAMENTO PROJECT NUMBER: G6B140289**  
**PO/CONTRACT: 0602261**

Laura Miller  
North Coast Labs  
5680 West End Road  
Arcata, CA 95521

Dear Ms. Miller,

This report contains the analytical results for the samples received under chain of custody by STL Sacramento on February 14, 2006. These samples are associated with your 003154, Simpson Arcata Reman project.

The test results in this report meet all NELAC requirements for parameters that accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The case narrative is an integral part of this report.

If you have any questions, please feel free to call me at (916) 374-4384.

Sincerely,



Karen Dahl  
Project Manager

**CASE NARRATIVE**

**STL SACRAMENTO PROJECT NUMBER G6B140289**

There were no anomalies associated with this project.

### STL Sacramento Certifications/Accreditations

Certifying State	Certificate #	Certifying State	Certificate #
Alaska	UST-055	Oregon*	CA 200005
Arizona	AZ0616	Pennsylvania	68-1272
Arkansas	04-067-0	South Carolina	87014002
California*	01119CA	Texas	TX 270-2004A
Colorado	NA	Utah*	QUAN1
Connecticut	PH-0691	Virginia	00178
Florida*	E87570	Washington	C087
Georgia	960	West Virginia	9930C-334
Hawaii	NA	Wisconsin	998204680
Louisiana*	01944	NFESC	NA
Michigan	9947	USACE	NA
Nevada	CA44	USDA Foreign Plant	37-82605
New Jersey*	CA005	USDA Foreign Soil	S-46613
New York*	11666		

\*NELAP accredited. A more detailed parameter list is available upon request. Updated 1/27/05

### QC Parameter Definitions

**QC Batch:** The QC batch consists of a set of up to 20 field samples that behave similarly (i.e., same matrix) and are processed using the same procedures, reagents, and standards at the same time.

**Method Blank:** An analytical control consisting of all reagents, which may include internal standards and surrogates, and is carried through the entire analytical procedure. The method blank is used to define the level of laboratory background contamination.

**Laboratory Control Sample and Laboratory Control Sample Duplicate (LCS/LCSD):**

An aliquot of blank matrix spiked with known amounts of representative target analytes. The LCS (and LCSD as required) is carried through the entire analytical process and is used to monitor the accuracy of the analytical process independent of potential matrix effects. If an LCSD is performed, it may also be used to evaluate the precision of the process.

**Duplicate Sample (DU):** Different aliquots of the same sample are analyzed to evaluate the precision of an analysis.

**Surrogates:** Organic compounds not expected to be detected in field samples, which behave similarly to target analytes. These are added to every sample within a batch at a known concentration to determine the efficiency of the sample preparation and analytical process.

**Matrix Spike and Matrix Spike Duplicate (MS/MSD):** An MS is an aliquot of a matrix fortified with known quantities of specific compounds and subjected to an entire analytical procedure in order to indicate the appropriateness of the method for a particular matrix. The percent recovery for the respective compound(s) is then calculated. The MSD is a second aliquot of the same matrix as the matrix spike, also spiked, in order to determine the precision of the method.

**Isotope Dilution:** For isotope dilution methods, isotopically labeled analogs (internal standards) of the native target analytes are spiked into the sample at time of extraction. These internal standards are used for quantitation, and monitor and correct for matrix effects. Since matrix effects on method performance can be judged by the recovery of these analogs, there is little added benefit of performing MS/MSD for these methods. MS/MSD are only performed for client or QAPP requirements.

**Control Limits:** The reported control limits are either based on laboratory historical data, method requirements, or project data quality objectives. The control limits represent the estimated uncertainty of the test results.

## SAMPLE SUMMARY

G6B140289

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
HXFAD	001	MW-2	02/09/06	12:15
HXFAK	002	MW-3	02/09/06	13:10
HXFAN	003	MW-7	02/09/06	14:55
HXFAQ	004	MW-8	02/09/06	15:50
HXFAT	005	DUP	02/09/06	

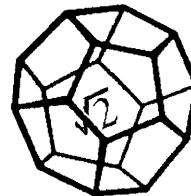
**NOTE (S) :**

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

**Sub-Contract  
Chain of Custody Record**

Date Shipped: 2/13/06 Carrier: ups

Air Bill #: \_\_\_\_\_ Cooler #: \_\_\_\_\_



**NORTH COAST  
LABORATORIES LTD.**

**Subcontractor:** STLSAC  
5755 8th St. East  
Seattle, WA 98424

**Phone:** 253 922-2310  
**Attention Line:** Sample Receiving

**Send Results to:** North Coast Labs  
5680 West End Road  
Arcata, CA 95521  
Attn: Laura Miller  
(707) 822-4649

Relinquished By: (signature)

2/13/06  
1400  
Date/Time

Received By: (signature)

3/14/06 - 1045  
Date/Time

Relinquished By: (signature)

Date/Time

Received By: (signature)

Date/Time

Relinquished By: (signature)

Date/Time

Received By: (signature)

Date/Time

**Analysis Request**

**NCL Sample #:** **Sample ID:**

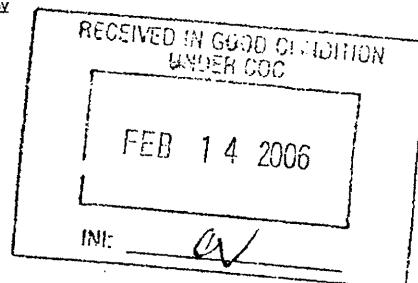
<u>0602261-1A</u>	<u>MW-2</u>	<u>2/9/06 12:15:00 PM</u>
<u>0602261-2A</u>	<u>MW-3</u>	<u>2/9/06 1:10:00 PM</u>
<u>0602261-3A</u>	<u>MW-7</u>	<u>2/9/06 2:55:00 PM</u>
<u>0602261-4A</u>	<u>MW-8</u>	<u>2/9/06 3:50:00 PM</u>
<u>0602261-5A</u>	<u>DUP</u>	<u>2/9/06</u>

**Analysis / Matrix:**

EPA 8270 - Phenols only  
EPA 8270 - Phenols only

Special Instructions: Please include Sample ID on analytical report.  
Please include QC Data

proj. Name = 003154, Simpson Arcata Roman  
log code = SHNE



Date Due: 2/24/06

Rush Charges Authorized:

No

Preservative:

None

Return Chain of Custody to NCL

5680 West End Road • Arcata California 95521-9202 • 707-822-4649 • FAX 707-822-6831

G6B140289  
STL Sacramento (916) 373 - 5600

SEVERN  
TRENT

STL

LOT RECEIPT CHECKLIST  
STL Sacramento

CLIENT North Coast Lab PM KD LOG # 37164

LOT# (QUANTIMS ID) G6B140289 QUOTE# 29173 LOCATION W22B

DATE RECEIVED 2/14/06 TIME RECEIVED 0850 Initials av Date 2/14/06

DELIVERED BY  FEDEX  CA OVERNIGHT  CLIENT  
 AIRBORNE  GOLDENSTATE  DHL  
 UPS  BAX GLOBAL  GO-GETTERS  
 STL COURIER  COURIERS ON DEMAND  
 OTHER

CUSTODY SEAL STATUS  INTACT  BROKEN  N/A

CUSTODY SEAL #(S) \_\_\_\_\_

SHIPPING CONTAINER(S)  STL  CLIENT  N/A

TEMPERATURE RECORD (IN °C) IR 1  3  OTHER \_\_\_\_\_

COC #(S) N/A \_\_\_\_\_

TEMPERATURE BLANK Observed: \_\_\_\_\_ Corrected: \_\_\_\_\_

SAMPLE TEMPERATURE

Observed: 3 5 4 Average: 4 Corrected Average: 4

COLLECTOR'S NAME:  Verified from COC  Not on COC

pH MEASURED  YES  ANOMALY  N/A

LABELED BY \_\_\_\_\_

LABELS CHECKED BY \_\_\_\_\_

PEER REVIEW  N/A

SHORT HOLD TEST NOTIFICATION

SAMPLE RECEIVING

WETCHEM  N/A

VOA-ENCORES  N/A

METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL  N/A

COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES  N/A

Clouseau  TEMPERATURE EXCEEDED (2 °C – 6 °C)\*  N/A

WET ICE  BLUE ICE  GEL PACK  NO COOLING AGENTS USED

PM NOTIFIED

Notes: \_\_\_\_\_

\*1 Acceptable temperature range for State of Wisconsin samples is  $\leq 4^{\circ}\text{C}$ .

Lot

ID: G6B140289

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VOA*	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
VOAh*	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
AGB																				
AGBs																				
250AGB																				
250AGBs																				
250AGBn																				
500AGB																				
AGJ	/	/	/	/	/															
500AGJ																				
250AGJ																				
125AGJ																				
CGJ																				
500CGJ																				
250CGJ																				
125CGJ																				
PJ																				
PJn																				
500PJ																				
500PJn																				
500PJna																				
500PJzn/na																				
250PJ																				
250PJn																				
250PJna																				
250PJzn/na																				
Acetate Tube																				
"CT																				
Encore																				
Folder/filter																				
PUF																				
Petri/Filter																				
XAD Trap																				
Ziploc																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

h = hydrochloric acid s = sulfuric acid na = sodium hydroxide

n = nitric acid

zn = zinc acetate

Number of VOAs with air bubbles present / total number of VOAs

QA-185 5/05 EM

Page 3

North Coast Laboratories LTD

Client Sample ID: MW-2

GC/MS Semivolatiles

Lot-Sample #....:	G6B140289-001	Work Order #....:	HXFAD1AA	Matrix.....:	WG
Date Sampled....:	02/09/06	Date Received...:	02/14/06		
Prep Date.....:	02/16/06	Analysis Date...:	02/22/06		
Prep Batch #....:	6047233				
Dilution Factor:	1.01	Method.....:	SW846 8270C		

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
4-Chloro-3-methylphenol	ND	10	ug/L
2-Chlorophenol	ND	10	ug/L
2,4-Dichlorophenol	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
2,4-Dinitrophenol	ND	50	ug/L
2-Methylphenol	ND	10	ug/L
3-Methylphenol & 4-Methylphenol	ND	20	ug/L
2-Nitrophenol	ND	10	ug/L
4-Nitrophenol	ND	50	ug/L
Pentachlorophenol	ND	50	ug/L
Phenol	ND	10	ug/L
2,3,5,6-Tetrachlorophenol	ND	50	ug/L
2,4,5-Trichloro- phenol	ND	10	ug/L
2,4,6-Trichloro- phenol	ND	10	ug/L
4,6-Dinitro- 2-methylphenol	ND	50	ug/L
2,6-Dichlorophenol	ND	10	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Chlorophenol-d4	79	(25 - 101)
1,2-Dichlorobenzene-d4	74	(49 - 99 )
2-Fluorobiphenyl	83	(47 - 106)
2-Fluorophenol	52	(10 - 70 )
Nitrobenzene-d5	82	(50 - 102)
Phenol-d5	34	(10 - 47 )
Terphenyl-d14	74	(40 - 125)
2,4,6-Tribromophenol	77	(21 - 127)

## North Coast Laboratories LTD

Client Sample ID: MW-3

## GC/MS Semivolatiles

Lot-Sample #....: G6B140289-002      Work Order #....: HXFAK1AA      Matrix.....: WG  
 Date Sampled....: 02/09/06      Date Received...: 02/14/06  
 Prep Date.....: 02/16/06      Analysis Date...: 02/22/06  
 Prep Batch #....: 6047233  
 Dilution Factor: 1.01      Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
4-Chloro-3-methylphenol	ND	10	ug/L
2-Chlorophenol	ND	10	ug/L
2,4-Dichlorophenol	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
2,4-Dinitrophenol	ND	50	ug/L
2-Methylphenol	ND	10	ug/L
3-Methylphenol & 4-Methylphenol	ND	20	ug/L
2-Nitrophenol	ND	10	ug/L
4-Nitrophenol	ND	50	ug/L
Pentachlorophenol	ND	50	ug/L
Phenol	ND	10	ug/L
2,3,5,6-Tetrachlorophenol	ND	50	ug/L
2,4,5-Trichloro- phenol	ND	10	ug/L
2,4,6-Trichloro- phenol	ND	10	ug/L
4,6-Dinitro- 2-methylphenol	ND	50	ug/L
2,6-Dichlorophenol	ND	10	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Chlorophenol-d4	77	(25 - 101)
1,2-Dichlorobenzene-d4	71	(49 - 99 )
2-Fluorobiphenyl	81	(47 - 106)
2-Fluorophenol	50	(10 - 70 )
Nitrobenzene-d5	81	(50 - 102)
Phenol-d5	33	(10 - 47 )
Terphenyl-d14	78	(40 - 125)
2,4,6-Tribromophenol	84	(21 - 127)

## North Coast Laboratories LTD

Client Sample ID: MW-7

## GC/MS Semivolatiles

Lot-Sample #....: G6B140289-003    Work Order #....: HXFAN1AA    Matrix.....: WG  
 Date Sampled....: 02/09/06    Date Received...: 02/14/06  
 Prep Date.....: 02/16/06    Analysis Date...: 02/22/06  
 Prep Batch #....: 6047233  
 Dilution Factor: 1.01    Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
4-Chloro-3-methylphenol	ND	10	ug/L
2-Chlorophenol	ND	10	ug/L
2,4-Dichlorophenol	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
2,4-Dinitrophenol	ND	50	ug/L
2-Methylphenol	ND	10	ug/L
3-Methylphenol & 4-Methylphenol	ND	20	ug/L
2-Nitrophenol	ND	10	ug/L
4-Nitrophenol	ND	50	ug/L
Pentachlorophenol	ND	50	ug/L
Phenol	ND	10	ug/L
2,3,5,6-Tetrachlorophenol	ND	50	ug/L
2,4,5-Trichloro- phenol	ND	10	ug/L
2,4,6-Trichloro- phenol	ND	10	ug/L
4,6-Dinitro- 2-methylphenol	ND	50	ug/L
2,6-Dichlorophenol	ND	10	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Chlorophenol-d4	59	(25 - 101)
1,2-Dichlorobenzene-d4	66	(49 - 99 )
2-Fluorobiphenyl	73	(47 - 106)
2-Fluorophenol	35	(10 - 70 )
Nitrobenzene-d5	71	(50 - 102)
Phenol-d5	29	(10 - 47 )
Terphenyl-d14	71	(40 - 125)
2,4,6-Tribromophenol	70	(21 - 127)

## North Coast Laboratories LTD

Client Sample ID: MW-8

## GC/MS Semivolatiles

Lot-Sample #....: G6B140289-004    Work Order #....: HXFAQ1AA    Matrix.....: WG  
 Date Sampled....: 02/09/06    Date Received...: 02/14/06  
 Prep Date.....: 02/16/06    Analysis Date...: 02/22/06  
 Prep Batch #....: 6047233  
 Dilution Factor: 1.01    Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
4-Chloro-3-methylphenol	ND	10	ug/L
2-Chlorophenol	ND	10	ug/L
2,4-Dichlorophenol	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
2,4-Dinitrophenol	ND	50	ug/L
2-Methylphenol	ND	10	ug/L
3-Methylphenol & 4-Methylphenol	ND	20	ug/L
2-Nitrophenol	ND	10	ug/L
4-Nitrophenol	ND	50	ug/L
Pentachlorophenol	ND	50	ug/L
Phenol	ND	10	ug/L
2,3,5,6-Tetrachlorophenol	ND	50	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2,4,6-Trichlorophenol	ND	10	ug/L
4,6-Dinitro-2-methylphenol	ND	50	ug/L
2,6-Dichlorophenol	ND	10	ug/L
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
2-Chlorophenol-d4	78	(25 - 101)	
1,2-Dichlorobenzene-d4	77	(49 - 99 )	
2-Fluorobiphenyl	82	(47 - 106)	
2-Fluorophenol	54	(10 - 70 )	
Nitrobenzene-d5	81	(50 - 102)	
Phenol-d5	36	(10 - 47 )	
Terphenyl-d14	72	(40 - 125)	
2,4,6-Tribromophenol	84	(21 - 127)	

## North Coast Laboratories LTD

Client Sample ID: DUP

## GC/MS Semivolatiles

Lot-Sample #....: G6B140289-005    Work Order #....: HXFAT1AA    Matrix.....: WG  
 Date Sampled...: 02/09/06    Date Received...: 02/14/06  
 Prep Date.....: 02/16/06    Analysis Date...: 02/22/06  
 Prep Batch #....: 6047233  
 Dilution Factor: 1.01    Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
4-Chloro-3-methylphenol	ND	10	ug/L
2-Chlorophenol	ND	10	ug/L
2,4-Dichlorophenol	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
2,4-Dinitrophenol	ND	50	ug/L
2-Methylphenol	ND	10	ug/L
3-Methylphenol & 4-Methylphenol	ND	20	ug/L
2-Nitrophenol	ND	10	ug/L
4-Nitrophenol	ND	50	ug/L
Pentachlorophenol	ND	50	ug/L
Phenol	ND	10	ug/L
2,3,5,6-Tetrachlorophenol	ND	50	ug/L
2,4,5-Trichloro- phenol	ND	10	ug/L
2,4,6-Trichloro- phenol	ND	10	ug/L
4,6-Dinitro- 2-methylphenol	ND	50	ug/L
2,6-Dichlorophenol	ND	10	ug/L
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
		(25 - 101)	(49 - 99 )
2-Chlorophenol-d4	57	(47 - 106)	(10 - 70 )
1,2-Dichlorobenzene-d4	58	(50 - 102)	(10 - 47 )
2-Fluorobiphenyl	69	(40 - 125)	(21 - 127)
2-Fluorophenol	34		
Nitrobenzene-d5	69		
Phenol-d5	29		
Terphenyl-d14	65		
2,4,6-Tribromophenol	66		

# QC DATA ASSOCIATION SUMMARY

G6B140289

## Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
001	WG	SW846 8270C		6047233	
002	WG	SW846 8270C		6047233	
003	WG	SW846 8270C		6047233	
004	WG	SW846 8270C		6047233	
005	WG	SW846 8270C		6047233	

## METHOD BLANK REPORT

## GC/MS Semivolatiles

Client Lot #....: G6B140289  
 MB Lot-Sample #: G6B160000-233

Work Order #....: HXXXK31AA  
 Prep Date.....: 02/16/06

Matrix.....: WATER

Analysis Date..: 02/22/06  
 Dilution Factor: 1

Prep Batch #....: 6047233

<u>PARAMETER</u>	<u>RESULT</u>	REPORTING		
		<u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
4-Chloro-3-methylphenol	ND	10	ug/L	SW846 8270C
2-Chlorophenol	ND	10	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	10	ug/L	SW846 8270C
4,6-Dinitro- 2-methylphenol	ND	50	ug/L	SW846 8270C
2,4-Dinitrophenol	ND	50	ug/L	SW846 8270C
2-Methylphenol	ND	10	ug/L	SW846 8270C
2-Nitrophenol	ND	10	ug/L	SW846 8270C
4-Nitrophenol	ND	50	ug/L	SW846 8270C
Pentachlorophenol	ND	50	ug/L	SW846 8270C
Phenol	ND	10	ug/L	SW846 8270C
2,4,5-Trichloro- phenol	ND	10	ug/L	SW846 8270C
2,4,6-Trichloro- phenol	ND	10	ug/L	SW846 8270C
3-Methylphenol & 4-Methylphenol	ND	20	ug/L	SW846 8270C
2,3,5,6-Tetrachlorophenol	ND	50	ug/L	SW846 8270C
2,6-Dichlorophenol	ND	10	ug/L	SW846 8270C

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	RECOVERY	
		<u>LIMITS</u>	
2-Chlorophenol-d4	86	(25 - 101)	
1,2-Dichlorobenzene-d4	75	(49 - 99)	
2-Fluorobiphenyl	93	(47 - 106)	
2-Fluorophenol	63	(10 - 70)	
Nitrobenzene-d5	95	(50 - 102)	
Phenol-d5	42	(10 - 47)	
Terphenyl-d14	85	(40 - 125)	
2,4,6-Tribromophenol	81	(21 - 127)	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

## LABORATORY CONTROL SAMPLE DATA REPORT

## GC/MS Semivolatiles

Client Lot #....: G6B140289      Work Order #....: HXKK31AC-LCS      Matrix.....: WATER  
 LCS Lot-Sample#: G6B160000-233      HXKK31AD-LCSD  
 Prep Date.....: 02/16/06      Analysis Date...: 02/22/06  
 Prep Batch #:....: 6047233  
 Dilution Factor: 1

PARAMETER	SPIKE	MEASURED	PERCENT	RPD	METHOD
	AMOUNT	AMOUNT	UNITS		
4-Chloro-3-methylphenol	100	87.0	ug/L	87	SW846 8270C
	100	85.7	ug/L	86	SW846 8270C
2-Chlorophenol	100	81.9	ug/L	82	SW846 8270C
	100	79.6	ug/L	80	SW846 8270C
2,4-Dichlorophenol	100	86.2	ug/L	86	SW846 8270C
	100	81.7	ug/L	82	SW846 8270C
2,4-Dimethylphenol	100	77.7	ug/L	78	SW846 8270C
	100	71.7	ug/L	72	SW846 8270C
4,6-Dinitro- 2-methylphenol	100	90.8	ug/L	91	SW846 8270C
	100	97.8	ug/L	98	7.3    SW846 8270C
2,4-Dinitrophenol	100	73.3	ug/L	73	SW846 8270C
	100	78.8	ug/L	79	7.2    SW846 8270C
2-Methylphenol	100	73.4	ug/L	73	SW846 8270C
	100	73.8	ug/L	74	0.55    SW846 8270C
2-Nitrophenol	100	84.2	ug/L	84	SW846 8270C
	100	82.5	ug/L	82	2.0    SW846 8270C
4-Nitrophenol	100	50.2	ug/L	50	SW846 8270C
	100	53.0	ug/L	53	5.3    SW846 8270C
Pentachlorophenol	100	96.8	ug/L	97	SW846 8270C
	100	103	ug/L	103	6.2    SW846 8270C
Phenol	100	44.1	ug/L	44	SW846 8270C
	100	40.0	ug/L	40	9.6    SW846 8270C
2,4,5-Trichloro- phenol	100	91.8	ug/L	92	SW846 8270C
	100	94.3	ug/L	94	2.7    SW846 8270C
2,4,6-Trichloro- phenol	100	94.9	ug/L	95	SW846 8270C
	100	93.4	ug/L	93	1.6    SW846 8270C

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #....: G6B140289      Work Order #....: HXKK31AC-LCS      Matrix.....: WATER  
LCS Lot-Sample#: G6B160000-233                                    HXKK31AD-LCSD

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
2-Chlorophenol-d4	80	(25 - 101)
	78	(25 - 101)
1,2-Dichlorobenzene-d4	73	(49 - 99)
	71	(49 - 99)
2-Fluorobiphenyl	86	(47 - 106)
	84	(47 - 106)
2-Fluorophenol	61	(10 - 70)
	58	(10 - 70)
Nitrobenzene-d5	84	(50 - 102)
	80	(50 - 102)
Phenol-d5	38	(10 - 47)
	36	(10 - 47)
Terphenyl-d14	93	(40 - 125)
	106	(40 - 125)
2,4,6-Tribromophenol	96	(21 - 127)
	102	(21 - 127)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

## LABORATORY CONTROL SAMPLE EVALUATION REPORT

## GC/MS Semivolatiles

Client Lot #...: G6B140289      Work Order #...: HXKK31AC-LCS      Matrix.....: WATER  
 LCS Lot-Sample#: G6B160000-233      HXKK31AD-LCSD  
 Prep Date.....: 02/16/06      Analysis Date...: 02/22/06  
 Prep Batch #...: 6047233  
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY <u>LIMITS</u>	RPD	RPD <u>LIMITS</u>	METHOD
4-Chloro-3-methylphenol	87	(60 - 100)			SW846 8270C
	86	(60 - 100)	1.5	(0-26)	SW846 8270C
2-Chlorophenol	82	(48 - 102)			SW846 8270C
	80	(48 - 102)	2.8	(0-34)	SW846 8270C
2,4-Dichlorophenol	86	(52 - 99)			SW846 8270C
	82	(52 - 99)	5.4	(0-31)	SW846 8270C
2,4-Dimethylphenol	78	(49 - 89)			SW846 8270C
	72	(49 - 89)	8.0	(0-25)	SW846 8270C
4,6-Dinitro- 2-methylphenol	91	(35 - 127)			SW846 8270C
	98	(35 - 127)	7.3	(0-47)	SW846 8270C
2,4-Dinitrophenol	73	(10 - 131)			SW846 8270C
	79	(10 - 131)	7.2	(0-175)	SW846 8270C
2-Methylphenol	73	(49 - 91)			SW846 8270C
	74	(49 - 91)	0.55	(0-29)	SW846 8270C
2-Nitrophenol	84	(45 - 108)			SW846 8270C
	82	(45 - 108)	2.0	(0-34)	SW846 8270C
4-Nitrophenol	50	(18 - 63)			SW846 8270C
	53	(18 - 63)	5.3	(0-67)	SW846 8270C
Pentachlorophenol	97	(35 - 118)			SW846 8270C
	103	(35 - 118)	6.2	(0-39)	SW846 8270C
Phenol	44	(16 - 56)			SW846 8270C
	40	(16 - 56)	9.6	(0-71)	SW846 8270C
2,4,5-Trichloro- phenol	92	(56 - 106)			SW846 8270C
	94	(56 - 106)	2.7	(0-28)	SW846 8270C
2,4,6-Trichloro- phenol	95	(49 - 108)			SW846 8270C
	93	(49 - 108)	1.6	(0-27)	SW846 8270C

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: G6B140289      Work Order #...: HXKK31AC-LCS      Matrix.....: WATER  
LCS Lot-Sample#: G6B160000-233                                    HXKK31AD-LCSD

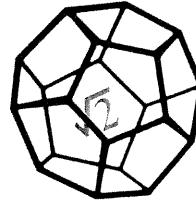
<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
2-Chlorophenol-d4	80	(25 - 101)
	78	(25 - 101)
1,2-Dichlorobenzene-d4	73	(49 - 99)
	71	(49 - 99)
2-Fluorobiphenyl	86	(47 - 106)
	84	(47 - 106)
2-Fluorophenol	61	(10 - 70)
	58	(10 - 70)
Nitrobenzene-d5	84	(50 - 102)
	80	(50 - 102)
Phenol-d5	38	(10 - 47)
	36	(10 - 47)
Terphenyl-d14	93	(40 - 125)
	106	(40 - 125)
2,4,6-Tribromophenol	96	(21 - 127)
	102	(21 - 127)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

REF ID: FEB 28 2006



**NORTH COAST  
LABORATORIES LTD.**

February 24, 2006

SHN Consulting Engineers and Geologists  
812 West Wabash Avenue  
Eureka, CA 95501

Attn: Frans Lowman

RE: 003154, Simpson Arcata Reman

Order No.: 0602191  
Invoice No.: 56449  
PO No.:  
ELAP No. 1247-Expires July 2006

**SAMPLE IDENTIFICATION**

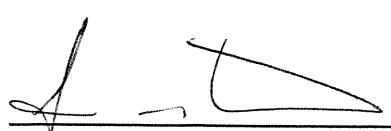
Fraction	Client Sample Description
01A	MW-2
01B	MW-2
01C	MW-2
01F	MW-2 (Dissolved)
02A	MW-3
02B	MW-3
02C	MW-3
02F	MW-3 (Dissolved)
03A	MW-7
03B	MW-7
03C	MW-7
03F	MW-7 (Dissolved)
04A	MW-8
04B	MW-8
04C	MW-8
04F	MW-8 (Dissolved)
05A	DUP
05B	DUP
05C	DUP
05F	DUP (Dissolved)
06A	Trip Blank

ND = Not Detected at the Reporting Limit

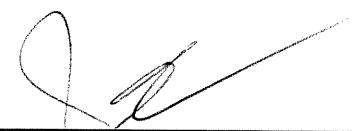
Limit = Reporting Limit

All solid results are expressed on a wet-weight basis unless otherwise noted.

**REPORT CERTIFIED BY**

  
\_\_\_\_\_  
Collin Blackstone  
Laboratory Supervisor(s)

QA Unit

  
\_\_\_\_\_  
Jesse G. Chaney, Jr.  
Laboratory Director

**CLIENT:** SHN Consulting Engineers and Geologists  
**Project:** 003154, Simpson Arcata Reman  
**Lab Order:** 0602191

**CASE NARRATIVE****Chloride:**

The matrix spikes were not quantifiable (NQ) due to the large amount of analyte in the sample which was spiked.

Date: 24-Feb-06  
WorkOrder: 0602191

## ANALYTICAL REPORT

Client Sample ID: MW-2  
Lab ID: 0602191-01A

Received: 2/9/06

Collected: 2/9/06 12:15

Test Name: Penta- and Tetrachlorophenol

Reference: Canadian Pulp Report

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Tetrachlorophenol	ND	1.0	µg/L	1.0	2/10/06	2/14/06
Pentachlorophenol	ND	0.30	µg/L	1.0	2/10/06	2/14/06
Surrogate: Dibromophenol	96.5	66.5-118	% Rec	1.0	2/10/06	2/14/06

Client Sample ID: MW-2  
Lab ID: 0602191-01B

Received: 2/9/06

Collected: 2/9/06 12:15

Test Name: Alkalinity

Reference: Std. Meth. 19th Ed. 2320 B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Alkalinity	62	1.0	mg/L CaCO <sub>3</sub>	1.0		2/21/06

Test Name: Chloride, sulfate, fluoride, bromide

Reference: EPA 300.0

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Chloride	4.6	0.10	mg/L	1.0		2/10/06
Sulfate	7.8	0.50	mg/L	1.0		2/10/06

Test Name: Nitrate/Nitrite

Reference: EPA 300.0

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Nitrate (as Nitrogen)	4.7	0.10	mg/L	1.0		2/10/06

Date: 24-Feb-06  
WorkOrder: 0602191

## ANALYTICAL REPORT

Client Sample ID: MW-2  
Lab ID: 0602191-01C

Received: 2/9/06

Collected: 2/9/06 12:15

Test Name: EPA 8260B

Reference: EPA 5030B/8260B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Chloromethane	ND	2.0	µg/L	1.0		2/20/06
Vinyl chloride	ND	1.0	µg/L	1.0		2/20/06
Bromomethane	ND	1.0	µg/L	1.0		2/20/06
Chloroethane	ND	1.0	µg/L	1.0		2/20/06
Trichlorofluoromethane	ND	1.0	µg/L	1.0		2/20/06
1,1-Dichloroethene	ND	1.0	µg/L	1.0		2/20/06
Methylene chloride	ND	2.0	µg/L	1.0		2/20/06
trans-1,2-Dichloroethene	ND	1.0	µg/L	1.0		2/20/06
1,1-Dichloroethane	ND	1.0	µg/L	1.0		2/20/06
cis-1,2-Dichloroethene	ND	1.0	µg/L	1.0		2/20/06
Chloroform	ND	1.0	µg/L	1.0		2/20/06
Carbon Tetrachloride	ND	1.0	µg/L	1.0		2/20/06
1,1,1-Trichloroethane	ND	1.0	µg/L	1.0		2/20/06
Benzene	ND	0.50	µg/L	1.0		2/20/06
1,2-Dichloroethane	ND	1.0	µg/L	1.0		2/20/06
Trichloroethene	ND	1.0	µg/L	1.0		2/20/06
1,2-Dichloropropane	ND	1.0	µg/L	1.0		2/20/06
Bromodichloromethane	ND	1.0	µg/L	1.0		2/20/06
cis-1,3-Dichloropropene	ND	1.0	µg/L	1.0		2/20/06
Toluene	ND	0.50	µg/L	1.0		2/20/06
Tetrachloroethene	ND	1.0	µg/L	1.0		2/20/06
trans-1,3-Dichloropropene	ND	1.0	µg/L	1.0		2/20/06
1,1,2-Trichloroethane	ND	1.0	µg/L	1.0		2/20/06
Dibromochloromethane	ND	1.0	µg/L	1.0		2/20/06
Chlorobenzene	ND	1.0	µg/L	1.0		2/20/06
Ethylbenzene	ND	0.50	µg/L	1.0		2/20/06
m,p-Xylene	ND	0.50	µg/L	1.0		2/20/06
o-Xylene	ND	0.50	µg/L	1.0		2/20/06
Bromoform	ND	1.0	µg/L	1.0		2/20/06
1,1,2,2-Tetrachloroethane	ND	1.0	µg/L	1.0		2/20/06
1,3-Dichlorobenzene	ND	1.0	µg/L	1.0		2/20/06
1,4-Dichlorobenzene	ND	1.0	µg/L	1.0		2/20/06
1,2-Dichlorobenzene	ND	1.0	µg/L	1.0		2/20/06
Surrogate: 1,2-Dichloroethane-d4	103	80-120	% Rec	1.0		2/20/06
Surrogate: 1,4-Dichlorobenzene-d4	94.6	80-120	% Rec	1.0		2/20/06
Surrogate: Dibromofluoromethane	102	80-120	% Rec	1.0		2/20/06
Surrogate: Toluene-d8	101	80-120	% Rec	1.0		2/20/06

Page 2 of 12

Date: 24-Feb-06  
WorkOrder: 0602191

## ANALYTICAL REPORT

Client Sample ID: MW-2 (Dissolved)  
Lab ID: 0602191-01F

Received: 2/9/06

Collected: 2/9/06 12:15

Test Name: ICAP Metals with Acid Digestion

Reference: EPA 200.7

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Iron	ND	100	µg/L	1.0	2/9/06	2/23/06
Manganese	ND	2.0	µg/L	1.0	2/9/06	2/23/06

Client Sample ID: MW-3  
Lab ID: 0602191-02A

Received: 2/9/06

Collected: 2/9/06 13:10

Test Name: Penta- and Tetrachlorophenol

Reference: Canadian Pulp Report

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Tetrachlorophenol	ND	1.0	µg/L	1.0	2/10/06	2/14/06
Pentachlorophenol	ND	0.30	µg/L	1.0	2/10/06	2/14/06
Surrogate: Dibromophenol	94.8	66.5-118	% Rec	1.0	2/10/06	2/14/06

Client Sample ID: MW-3  
Lab ID: 0602191-02B

Received: 2/9/06

Collected: 2/9/06 13:10

Test Name: Alkalinity

Reference: Std. Meth. 19th Ed. 2320 B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Alkalinity	130	1.0	mg/L CaCO <sub>3</sub>	1.0		2/21/06

Test Name: Chloride, sulfate, fluoride, bromide

Reference: EPA 300.0

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Chloride	10	0.10	mg/L	1.0		2/10/06
Sulfate	0.57	0.50	mg/L	1.0		2/10/06

Test Name: Nitrate/Nitrite

Reference: EPA 300.0

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Nitrate (as Nitrogen)	ND	0.10	mg/L	1.0		2/10/06

Date: 24-Feb-06  
WorkOrder: 0602191

## ANALYTICAL REPORT

Client Sample ID: MW-3  
Lab ID: 0602191-02C

Received: 2/9/06

Collected: 2/9/06 13:10

Test Name: EPA 8260B

Reference: EPA 5030B/8260B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Chloromethane	ND	2.0	µg/L	1.0		2/20/06
Vinyl chloride	2.6	1.0	µg/L	1.0		2/20/06
Bromomethane	ND	1.0	µg/L	1.0		2/20/06
Chloroethane	ND	1.0	µg/L	1.0		2/20/06
Trichlorofluoromethane	ND	1.0	µg/L	1.0		2/20/06
1,1-Dichloroethene	ND	1.0	µg/L	1.0		2/20/06
Methylene chloride	ND	2.0	µg/L	1.0		2/20/06
trans-1,2-Dichloroethene	ND	1.0	µg/L	1.0		2/20/06
1,1-Dichloroethane	ND	1.0	µg/L	1.0		2/20/06
cis-1,2-Dichloroethene	25	1.0	µg/L	1.0		2/20/06
Chloroform	ND	1.0	µg/L	1.0		2/20/06
Carbon Tetrachloride	ND	1.0	µg/L	1.0		2/20/06
1,1,1-Trichloroethane	ND	1.0	µg/L	1.0		2/20/06
Benzene	0.58	0.50	µg/L	1.0		2/20/06
1,2-Dichloroethane	ND	1.0	µg/L	1.0		2/20/06
Trichloroethene	ND	1.0	µg/L	1.0		2/20/06
1,2-Dichloropropane	ND	1.0	µg/L	1.0		2/20/06
Bromodichloromethane	ND	1.0	µg/L	1.0		2/20/06
cis-1,3-Dichloropropene	ND	1.0	µg/L	1.0		2/20/06
Toluene	ND	0.50	µg/L	1.0		2/20/06
Tetrachloroethene	ND	1.0	µg/L	1.0		2/20/06
trans-1,3-Dichloropropene	ND	1.0	µg/L	1.0		2/20/06
1,1,2-Trichloroethane	ND	1.0	µg/L	1.0		2/20/06
Dibromochloromethane	ND	1.0	µg/L	1.0		2/20/06
Chlorobenzene	ND	1.0	µg/L	1.0		2/20/06
Ethylbenzene	ND	0.50	µg/L	1.0		2/20/06
m,p-Xylene	ND	0.50	µg/L	1.0		2/20/06
o-Xylene	ND	0.50	µg/L	1.0		2/20/06
Bromoform	ND	1.0	µg/L	1.0		2/20/06
1,1,2,2-Tetrachloroethane	ND	1.0	µg/L	1.0		2/20/06
1,3-Dichlorobenzene	ND	1.0	µg/L	1.0		2/20/06
1,4-Dichlorobenzene	ND	1.0	µg/L	1.0		2/20/06
1,2-Dichlorobenzene	ND	1.0	µg/L	1.0		2/20/06
Surrogate: 1,2-Dichloroethane-d4	103	80-120	% Rec	1.0		2/20/06
Surrogate: 1,4-Dichlorobenzene-d4	94.8	80-120	% Rec	1.0		2/20/06
Surrogate: Dibromofluoromethane	102	80-120	% Rec	1.0		2/20/06
Surrogate: Toluene-d8	101	80-120	% Rec	1.0		2/20/06

Date: 24-Feb-06  
WorkOrder: 0602191

## ANALYTICAL REPORT

Client Sample ID: MW-3 (Dissolved) Received: 2/9/06 Collected: 2/9/06 13:10  
Lab ID: 0602191-02F

Test Name: ICAP Metals with Acid Digestion Reference: EPA 200.7

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Iron	470	100	µg/L	1.0	2/9/06	2/23/06
Manganese	580	2.0	µg/L	1.0	2/9/06	2/23/06

Client Sample ID: MW-7 Received: 2/9/06 Collected: 2/9/06 14:55  
Lab ID: 0602191-03A

Test Name: Penta- and Tetrachlorophenol Reference: Canadian Pulp Report

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Tetrachlorophenol	ND	1.0	µg/L	1.0	2/10/06	2/14/06
Pentachlorophenol	ND	0.30	µg/L	1.0	2/10/06	2/14/06
Surrogate: Dibromophenol	90.0	66.5-118	% Rec	1.0	2/10/06	2/14/06

Client Sample ID: MW-7 Received: 2/9/06 Collected: 2/9/06 14:55  
Lab ID: 0602191-03B

Test Name: Alkalinity Reference: Std. Meth. 19th Ed. 2320 B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Alkalinity	160	1.0	mg/L CaCO <sub>3</sub>	1.0		2/21/06

Test Name: Chloride, sulfate, fluoride, bromide Reference: EPA 300.0

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Chloride	8.7	0.10	mg/L	1.0		2/10/06
Sulfate	7.0	0.50	mg/L	1.0		2/10/06

Test Name: Nitrate/Nitrite Reference: EPA 300.0

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Nitrate (as Nitrogen)	ND	0.10	mg/L	1.0		2/10/06

Date: 24-Feb-06  
WorkOrder: 0602191

## ANALYTICAL REPORT

Client Sample ID: MW-7  
Lab ID: 0602191-03C

Received: 2/9/06

Collected: 2/9/06 14:55

Test Name: EPA 8260B

Reference: EPA 5030B/8260B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Chloromethane	ND	2.0	µg/L	1.0		2/20/06
Vinyl chloride	ND	1.0	µg/L	1.0		2/20/06
Bromomethane	ND	1.0	µg/L	1.0		2/20/06
Chloroethane	ND	1.0	µg/L	1.0		2/20/06
Trichlorofluoromethane	ND	1.0	µg/L	1.0		2/20/06
1,1-Dichloroethene	ND	1.0	µg/L	1.0		2/20/06
Methylene chloride	ND	2.0	µg/L	1.0		2/20/06
trans-1,2-Dichloroethene	ND	1.0	µg/L	1.0		2/20/06
1,1-Dichloroethane	ND	1.0	µg/L	1.0		2/20/06
cis-1,2-Dichloroethene	ND	1.0	µg/L	1.0		2/20/06
Chloroform	ND	1.0	µg/L	1.0		2/20/06
Carbon Tetrachloride	ND	1.0	µg/L	1.0		2/20/06
1,1,1-Trichloroethane	ND	1.0	µg/L	1.0		2/20/06
Benzene	0.66	0.50	µg/L	1.0		2/20/06
1,2-Dichloroethane	ND	1.0	µg/L	1.0		2/20/06
Trichloroethene	ND	1.0	µg/L	1.0		2/20/06
1,2-Dichloropropane	ND	1.0	µg/L	1.0		2/20/06
Bromodichloromethane	ND	1.0	µg/L	1.0		2/20/06
cis-1,3-Dichloropropene	ND	1.0	µg/L	1.0		2/20/06
Toluene	ND	0.50	µg/L	1.0		2/20/06
Tetrachloroethene	ND	1.0	µg/L	1.0		2/20/06
trans-1,3-Dichloropropene	ND	1.0	µg/L	1.0		2/20/06
1,1,2-Trichloroethane	ND	1.0	µg/L	1.0		2/20/06
Dibromochloromethane	ND	1.0	µg/L	1.0		2/20/06
Chlorobenzene	ND	1.0	µg/L	1.0		2/20/06
Ethylbenzene	ND	0.50	µg/L	1.0		2/20/06
m,p-Xylene	ND	0.50	µg/L	1.0		2/20/06
o-Xylene	ND	0.50	µg/L	1.0		2/20/06
Bromoform	ND	1.0	µg/L	1.0		2/20/06
1,1,2,2-Tetrachloroethane	ND	1.0	µg/L	1.0		2/20/06
1,3-Dichlorobenzene	ND	1.0	µg/L	1.0		2/20/06
1,4-Dichlorobenzene	ND	1.0	µg/L	1.0		2/20/06
1,2-Dichlorobenzene	ND	1.0	µg/L	1.0		2/20/06
Surrogate: 1,2-Dichloroethane-d4	104	80-120	% Rec	1.0		2/20/06
Surrogate: 1,4-Dichlorobenzene-d4	95.3	80-120	% Rec	1.0		2/20/06
Surrogate: Dibromofluoromethane	102	80-120	% Rec	1.0		2/20/06
Surrogate: Toluene-d8	101	80-120	% Rec	1.0		2/20/06

Date: 24-Feb-06  
WorkOrder: 0602191

## ANALYTICAL REPORT

Client Sample ID: MW-7 (Dissolved) Received: 2/9/06 Collected: 2/9/06 14:55  
Lab ID: 0602191-03F

Test Name: ICAP Metals with Acid Digestion Reference: EPA 200.7

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Iron	2,500	100	µg/L	1.0	2/9/06	2/23/06
Manganese	730	2.0	µg/L	1.0	2/9/06	2/23/06

Client Sample ID: MW-8 Received: 2/9/06 Collected: 2/9/06 15:50  
Lab ID: 0602191-04A

Test Name: Penta- and Tetrachlorophenol Reference: Canadian Pulp Report

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Tetrachlorophenol	ND	1.0	µg/L	1.0	2/10/06	2/14/06
Pentachlorophenol	ND	0.30	µg/L	1.0	2/10/06	2/14/06
Surrogate: Dibromophenol	92.1	66.5-118	% Rec	1.0	2/10/06	2/14/06

Client Sample ID: MW-8 Received: 2/9/06 Collected: 2/9/06 15:50  
Lab ID: 0602191-04B

Test Name: Alkalinity Reference: Std. Meth. 19th Ed. 2320 B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Alkalinity	210	1.0	mg/L CaCO <sub>3</sub>	1.0		2/21/06

Test Name: Chloride, sulfate, fluoride, bromide Reference: EPA 300.0

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Chloride	16	0.10	mg/L	1.0		2/10/06
Sulfate	ND	0.50	mg/L	1.0		2/10/06

Test Name: Nitrate/Nitrite Reference: EPA 300.0

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Nitrate (as Nitrogen)	ND	0.10	mg/L	1.0		2/10/06

Date: 24-Feb-06  
WorkOrder: 0602191

## ANALYTICAL REPORT

Client Sample ID: MW-8  
Lab ID: 0602191-04C

Received: 2/9/06

Collected: 2/9/06 15:50

Test Name: EPA 8260B

Reference: EPA 5030B/8260B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Chloromethane	ND	2.0	µg/L	1.0		2/20/06
Vinyl chloride	2.0	1.0	µg/L	1.0		2/20/06
Bromomethane	ND	1.0	µg/L	1.0		2/20/06
Chloroethane	ND	1.0	µg/L	1.0		2/20/06
Trichlorofluoromethane	ND	1.0	µg/L	1.0		2/20/06
1,1-Dichloroethene	ND	1.0	µg/L	1.0		2/20/06
Methylene chloride	ND	2.0	µg/L	1.0		2/20/06
trans-1,2-Dichloroethene	ND	1.0	µg/L	1.0		2/20/06
1,1-Dichloroethane	ND	1.0	µg/L	1.0		2/20/06
cis-1,2-Dichloroethene	ND	1.0	µg/L	1.0		2/20/06
Chloroform	ND	1.0	µg/L	1.0		2/20/06
Carbon Tetrachloride	ND	1.0	µg/L	1.0		2/20/06
1,1,1-Trichloroethane	ND	1.0	µg/L	1.0		2/20/06
Benzene	ND	0.50	µg/L	1.0		2/20/06
1,2-Dichloroethane	ND	1.0	µg/L	1.0		2/20/06
Trichloroethene	ND	1.0	µg/L	1.0		2/20/06
1,2-Dichloropropane	ND	1.0	µg/L	1.0		2/20/06
Bromodichloromethane	ND	1.0	µg/L	1.0		2/20/06
cis-1,3-Dichloropropene	ND	1.0	µg/L	1.0		2/20/06
Toluene	ND	0.50	µg/L	1.0		2/20/06
Tetrachloroethene	ND	1.0	µg/L	1.0		2/20/06
trans-1,3-Dichloropropene	ND	1.0	µg/L	1.0		2/20/06
1,1,2-Trichloroethane	ND	1.0	µg/L	1.0		2/20/06
Dibromochloromethane	ND	1.0	µg/L	1.0		2/20/06
Chlorobenzene	ND	1.0	µg/L	1.0		2/20/06
Ethylbenzene	ND	0.50	µg/L	1.0		2/20/06
m,p-Xylene	0.72	0.50	µg/L	1.0		2/20/06
o-Xylene	ND	0.50	µg/L	1.0		2/20/06
Bromoform	ND	1.0	µg/L	1.0		2/20/06
1,1,2,2-Tetrachloroethane	ND	1.0	µg/L	1.0		2/20/06
1,3-Dichlorobenzene	ND	1.0	µg/L	1.0		2/20/06
1,4-Dichlorobenzene	ND	1.0	µg/L	1.0		2/20/06
1,2-Dichlorobenzene	ND	1.0	µg/L	1.0		2/20/06
Surrogate: 1,2-Dichloroethane-d4	105	80-120	% Rec	1.0		2/20/06
Surrogate: 1,4-Dichlorobenzene-d4	95.5	80-120	% Rec	1.0		2/20/06
Surrogate: Dibromofluoromethane	103	80-120	% Rec	1.0		2/20/06
Surrogate: Toluene-d8	100	80-120	% Rec	1.0		2/20/06

Date: 24-Feb-06  
WorkOrder: 0602191

## ANALYTICAL REPORT

Client Sample ID: MW-8 (Dissolved) Received: 2/9/06 Collected: 2/9/06 15:50  
Lab ID: 0602191-04F

Test Name: ICAP Metals with Acid Digestion Reference: EPA 200.7

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Iron	14,000	100	µg/L	1.0	2/9/06	2/23/06
Manganese	1,800	2.0	µg/L	1.0	2/9/06	2/23/06

Client Sample ID: DUP Received: 2/9/06 Collected: 2/9/06 0:00  
Lab ID: 0602191-05A

Test Name: Penta- and Tetrachlorophenol Reference: Canadian Pulp Report

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Tetrachlorophenol	ND	1.0	µg/L	1.0	2/10/06	2/14/06
Pentachlorophenol	ND	0.30	µg/L	1.0	2/10/06	2/14/06
Surrogate: Dibromophenol	92.9	66.5-118	% Rec	1.0	2/10/06	2/14/06

Client Sample ID: DUP Received: 2/9/06 Collected: 2/9/06 0:00  
Lab ID: 0602191-05B

Test Name: Alkalinity Reference: Std. Meth. 19th Ed. 2320 B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Alkalinity	170	1.0	mg/L CaCO <sub>3</sub>	1.0		2/21/06

Test Name: Chloride, sulfate, fluoride, bromide Reference: EPA 300.0

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Chloride	8.5	0.10	mg/L	1.0		2/10/06
Sulfate	8.2	0.50	mg/L	1.0		2/10/06

Test Name: Nitrate/Nitrite Reference: EPA 300.0

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Nitrate (as Nitrogen)	ND	0.10	mg/L	1.0		2/10/06

Date: 24-Feb-06  
WorkOrder: 0602191

## ANALYTICAL REPORT

Client Sample ID: DUP  
Lab ID: 0602191-05C

Received: 2/9/06

Collected: 2/9/06 0:00

Test Name: EPA 8260B

Reference: EPA 5030B/8260B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Chloromethane	ND	2.0	µg/L	1.0		2/20/06
Vinyl chloride	1.1	1.0	µg/L	1.0		2/20/06
Bromomethane	ND	1.0	µg/L	1.0		2/20/06
Chloroethane	ND	1.0	µg/L	1.0		2/20/06
Trichlorofluoromethane	ND	1.0	µg/L	1.0		2/20/06
1,1-Dichloroethene	ND	1.0	µg/L	1.0		2/20/06
Methylene chloride	ND	2.0	µg/L	1.0		2/20/06
trans-1,2-Dichloroethene	ND	1.0	µg/L	1.0		2/20/06
1,1-Dichloroethane	ND	1.0	µg/L	1.0		2/20/06
cis-1,2-Dichloroethene	ND	1.0	µg/L	1.0		2/20/06
Chloroform	ND	1.0	µg/L	1.0		2/20/06
Carbon Tetrachloride	ND	1.0	µg/L	1.0		2/20/06
1,1,1-Trichloroethane	ND	1.0	µg/L	1.0		2/20/06
Benzene	0.76	0.50	µg/L	1.0		2/20/06
1,2-Dichloroethane	ND	1.0	µg/L	1.0		2/20/06
Trichloroethene	ND	1.0	µg/L	1.0		2/20/06
1,2-Dichloropropane	ND	1.0	µg/L	1.0		2/20/06
Bromodichloromethane	ND	1.0	µg/L	1.0		2/20/06
cis-1,3-Dichloropropene	ND	1.0	µg/L	1.0		2/20/06
Toluene	ND	0.50	µg/L	1.0		2/20/06
Tetrachloroethene	ND	1.0	µg/L	1.0		2/20/06
trans-1,3-Dichloropropene	ND	1.0	µg/L	1.0		2/20/06
1,1,2-Trichloroethane	ND	1.0	µg/L	1.0		2/20/06
Dibromochloromethane	ND	1.0	µg/L	1.0		2/20/06
Chlorobenzene	ND	1.0	µg/L	1.0		2/20/06
Ethylbenzene	ND	0.50	µg/L	1.0		2/20/06
m,p-Xylene	ND	0.50	µg/L	1.0		2/20/06
o-Xylene	ND	0.50	µg/L	1.0		2/20/06
Bromoform	ND	1.0	µg/L	1.0		2/20/06
1,1,2,2-Tetrachloroethane	ND	1.0	µg/L	1.0		2/20/06
1,3-Dichlorobenzene	ND	1.0	µg/L	1.0		2/20/06
1,4-Dichlorobenzene	ND	1.0	µg/L	1.0		2/20/06
1,2-Dichlorobenzene	ND	1.0	µg/L	1.0		2/20/06
Surrogate: 1,2-Dichloroethane-d4	104	80-120	% Rec	1.0		2/20/06
Surrogate: 1,4-Dichlorobenzene-d4	94.9	80-120	% Rec	1.0		2/20/06
Surrogate: Dibromofluoromethane	103	80-120	% Rec	1.0		2/20/06
Surrogate: Toluene-d8	100	80-120	% Rec	1.0		2/20/06

**Date:** 24-Feb-06  
**WorkOrder:** 0602191

## ANALYTICAL REPORT

**Client Sample ID:** DUP (Dissolved)  
**Lab ID:** 0602191-05F

**Received:** 2/9/06

**Collected:** 2/9/06 0:00

**Test Name:** ICAP Metals with Acid Digestion

**Reference:** EPA 200.7

<b>Parameter</b>	<b>Result</b>	<b>Limit</b>	<b>Units</b>	<b>DF</b>	<b>Extracted</b>	<b>Analyzed</b>
Iron	3,300	100	µg/L	1.0	2/9/06	2/23/06
Manganese	680	2.0	µg/L	1.0	2/9/06	2/23/06

Date: 24-Feb-06  
WorkOrder: 0602191

## ANALYTICAL REPORT

Client Sample ID: Trip Blank  
Lab ID: 0602191-06A

Received: 2/9/06

Collected:

Test Name: EPA 8260B

Reference: EPA 5030B/8260B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Chloromethane	ND	2.0	µg/L	1.0		2/20/06
Vinyl chloride	ND	1.0	µg/L	1.0		2/20/06
Bromomethane	ND	1.0	µg/L	1.0		2/20/06
Chloroethane	ND	1.0	µg/L	1.0		2/20/06
Trichlorofluoromethane	ND	1.0	µg/L	1.0		2/20/06
1,1-Dichloroethene	ND	1.0	µg/L	1.0		2/20/06
Methylene chloride	ND	2.0	µg/L	1.0		2/20/06
trans-1,2-Dichloroethene	ND	1.0	µg/L	1.0		2/20/06
1,1-Dichloroethane	ND	1.0	µg/L	1.0		2/20/06
cis-1,2-Dichloroethene	ND	1.0	µg/L	1.0		2/20/06
Chloroform	ND	1.0	µg/L	1.0		2/20/06
Carbon Tetrachloride	ND	1.0	µg/L	1.0		2/20/06
1,1,1-Trichloroethane	ND	1.0	µg/L	1.0		2/20/06
Benzene	ND	0.50	µg/L	1.0		2/20/06
1,2-Dichloroethane	ND	1.0	µg/L	1.0		2/20/06
Trichloroethene	ND	1.0	µg/L	1.0		2/20/06
1,2-Dichloropropane	ND	1.0	µg/L	1.0		2/20/06
Bromodichloromethane	ND	1.0	µg/L	1.0		2/20/06
cis-1,3-Dichloropropene	ND	1.0	µg/L	1.0		2/20/06
Toluene	ND	0.50	µg/L	1.0		2/20/06
Tetrachloroethene	ND	1.0	µg/L	1.0		2/20/06
trans-1,3-Dichloropropene	ND	1.0	µg/L	1.0		2/20/06
1,1,2-Trichloroethane	ND	1.0	µg/L	1.0		2/20/06
Dibromochloromethane	ND	1.0	µg/L	1.0		2/20/06
Chlorobenzene	ND	1.0	µg/L	1.0		2/20/06
Ethylbenzene	ND	0.50	µg/L	1.0		2/20/06
m,p-Xylene	ND	0.50	µg/L	1.0		2/20/06
o-Xylene	ND	0.50	µg/L	1.0		2/20/06
Bromoform	ND	1.0	µg/L	1.0		2/20/06
1,1,2,2-Tetrachloroethane	ND	1.0	µg/L	1.0		2/20/06
1,3-Dichlorobenzene	ND	1.0	µg/L	1.0		2/20/06
1,4-Dichlorobenzene	ND	1.0	µg/L	1.0		2/20/06
1,2-Dichlorobenzene	ND	1.0	µg/L	1.0		2/20/06
Surrogate: 1,2-Dichloroethane-d4	98.9	80-120	% Rec	1.0		2/20/06
Surrogate: 1,4-Dichlorobenzene-d4	92.9	80-120	% Rec	1.0		2/20/06
Surrogate: Dibromofluoromethane	97.2	80-120	% Rec	1.0		2/20/06
Surrogate: Toluene-d8	101	80-120	% Rec	1.0		2/20/06

# North Coast Laboratories, Ltd.

Date: 24-Feb-06

**CLIENT:** SHN Consulting Engineers and Geologists

**Work Order:** 0602191

**Project:** 003154, Simpson Arcata Reman

## QC SUMMARY REPORT

Method Blank

Sample ID	MB-2/20/06	Batch ID:	R39888	Test Code:	8260W	Units:	µg/L	Analysis Date 2/20/06 6:55:00 AM			Prep Date	
Client ID:		Run ID:	ORGCMSS_0602220A	SeqNo:	572959	% Rec	LowLimit	HighLimit	RPD Ref Val	% RPD	RPDLimit	Qual
Analyte		Result	Limit	SPK value	SPK Ref Val							
Chloromethane		0.1455	2.0									J
Vinyl chloride		ND	1.0									
Bromomethane		0.7069	1.0									J
Chloroethane		ND	1.0									
Trichlorofluoromethane		ND	1.0									
1,1-Dichloroethene		ND	1.0									
Methylene chloride		ND	2.0									
trans-1,2-Dichloroethene		ND	1.0									
1,1-Dichloroethane		ND	1.0									
cis-1,2-Dichloroethene		ND	1.0									
Chloroform		ND	1.0									
Carbon Tetrachloride		ND	1.0									
1,1,1-Trichloroethane		ND	1.0									
Benzene		ND	0.50									
1,2-Dichloroethane		ND	1.0									
Trichloroethene		ND	1.0									
1,2-Dichloropropane		ND	1.0									
Bromodichloromethane		ND	1.0									
cis-1,3-Dichloropropene		ND	1.0									
Toluene		0.1022	0.50									J
Tetrachloroethene		ND	1.0									
trans-1,3-Dichloropropene		ND	1.0									
1,1,2-Trichloroethane		ND	1.0									
Dibromochloromethane		ND	1.0									
Chlorobenzene		ND	1.0									
Ethylbenzene		ND	0.50									
m,p-Xylene		ND	0.50									
o-Xylene		ND	0.50									

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

**CLIENT:** SHN Consulting Engineers and Geologists  
**Work Order:** 0602191  
**Project:** 003154, Simpson Arcata Reman

## QC SUMMARY REPORT

Method Blank

Bromoform	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	0.07574	1.0
1,2-Dichlorobenzene	ND	1.0
1,2-Dichloroethane-d4	0.980	1.00
1,4-Dichlorobenzene-d4	0.920	1.00
Dibromofluoromethane	0.969	1.00
Toluene-d8	1.01	1.00

Sample ID	Batch ID:	Test Code:	IC1ONW	Units:	mg/L	Analysis Date	2/10/06 4:32:19 PM	Prep Date
Client ID:		Run ID:	INIC2_060210B			SeqNo:	570385	
Analyte		Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit
Chloride	ND	ND	0.10				RPD Ref Val	% RPD
Sulfate	ND	ND	0.50				RPD Ref Val	% RPD

Sample ID	Batch ID:	Test Code:	ICNOW	Units:	mg/L	Analysis Date	2/10/06 4:32:19 PM	Prep Date
Client ID:		Run ID:	INIC2_060210A			SeqNo:	570332	
Analyte		Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit
Nitrate (as Nitrogen)	ND	ND	0.10				RPD Ref Val	% RPD

Sample ID	Batch ID:	Test Code:	ICPX	Units:	µg/L	Analysis Date	2/23/06 2:12:00 PM	Prep Date
Client ID:		Run ID:	INICP1_060223B			SeqNo:	573186	
Analyte		Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit
Iron	ND	ND	100				RPD Ref Val	% RPD
Manganese	ND	ND	2.0				RPD Ref Val	% RPD

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
R - RPD outside accepted recovery limits

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

**CLIENT:** SHN Consulting Engineers and Geologists  
**Work Order:** 0602191  
**Project:** 003154, Simpson Arcata Reman

## QC SUMMARY REPORT

Method Blank

Sample ID	MB-15157	Batch ID:	15157	Test Code:	PCPTW	Units:	µg/L	Analysis Date	2/14/06 2:46:27 PM	Prep Date	2/10/06	
Client ID:		Run ID:	ORGCA_060214A	SeqNo:				SeqNo:	570851			
Analyte		Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	% RPD	RPD Limit	Qual
Tetrachlorophenol	ND	1.0										
Pentachlorophenol	ND	0.30										
Dibromophenol	4.67	0.10	5.00	0	93.4%	67	118		0			

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

# North Coast Laboratories, Ltd.

Date: 24-Feb-06

**CLIENT:** SHN Consulting Engineers and Geologists  
**Work Order:** 0602191  
**Project:** 003154, Simpson Arcata Reman

## QC SUMMARY REPORT

Laboratory Control Spike

Sample ID	Batch ID:	Test Code:	Units:	Analysis Date	Prep Date
Analyte		Run ID:	µg/L	SeqNo:	
Chloromethane	Batch ID: R39888	Test Code: 8260W	SPK Ref Val	% Rec	RPD Ref Val
Vinyl chloride	Sample ID: LCS-0613	Run ID: ORGCMS3_060220A	SPK value	% Rec	% RPD
Bromomethane			Limit	LowLimit	RPD Limit
Chloroethane				HighLimit	Qual
Trichlorofluoromethane					
1,1-Dichloroethene					
Methylene chloride					
trans-1,2-Dichloroethene					
1,1-Dichloroethane					
cis-1,2-Dichloroethene					
Chloroform					
Carbon Tetrachloride					
1,1,1-Trichloroethane					
Benzene					
1,2-Dichloroethane					
Trichloroethene					
1,2-Dichloropropane					
Bromodichloromethane					
cis-1,3-Dichloropropene					
Toluene					
Tetrachloroethene					
trans-1,3-Dichloropropene					
1,1,2-Trichloroethane					
Dibromoethane					
Chlorobenzene					
Ethylbenzene					
m,p-Xylene					
o-Xylene					
Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits			
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits			
		B - Analyte detected in the associated Method Blank			

**CLIENT:** SHN Consulting Engineers and Geologists

**Work Order:** 0602191

**Project:** 003154, Simpson Arcata Reman

## QC SUMMARY REPORT

### Laboratory Control Spike

	Bromoform	1,1,2,2-Tetrachloroethane	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,2-Dichlorobenzene	1,2-Dichloroethane-d4	1,4-Dichlorobenzene-d4	Dibromofluoromethane	Toluene-d8		
	18.91	1.0	20.0	0	94.6%	80	120	0	0		
	19.91	1.0	20.0	0	99.5%	80	120	0	0		
	20.26	1.0	20.0	0	101%	80	120	0	0		
	20.22	1.0	20.0	0	101%	80	120	0	0		
	19.99	1.0	20.0	0	100%	80	120	0	0		
	0.998	0.10	1.00	0	99.8%	61	127	0	0		
	0.982	0.10	1.00	0	98.2%	77	129	0	0		
	0.988	0.10	1.00	0	98.8%	80	120	0	0		
	1.03	0.10	1.00	0	103%	80	120	0	0		

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
R - RPD outside accepted recovery limits

S - Spike Recovery outside accepted recovery limits  
B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

**CLIENT:** SHN Consulting Engineers and Geologists  
**Work Order:** 0602191  
**Project:** 003154, Simpson Arcata Reman

## QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID	LCSD-06113	Batch ID:	R99888	Test Code:	8260W	Units: µg/L	Analysis Date 2/20/06 3:56:00 AM			Prep Date		
Analyte		Client ID:		Run ID:	ORGCMSS3_060220A	% Rec	LowLimit	HighLimit	RPD Ref Val	% RPD	RPDLimit	Qual
						SeqNo:	572957					
Chloromethane	16.58	2.0	20.0	0	82.9%	80	120	18.2	9.07%	20		
Vinyl chloride	18.83	1.0	20.0	0	94.1%	80	120	19.0	0.852%	20		
Bromomethane	23.18	1.0	20.0	0	116%	80	120	22.4	3.57%	20		
Chloroethane	19.45	1.0	20.0	0	97.3%	80	120	20.2	3.49%	20		
Trichlorofluoromethane	19.96	1.0	20.0	0	99.8%	80	120	20.2	1.33%	20		
1,1-Dichloroethene	19.95	1.0	20.0	0	99.8%	80	120	20.2	0.956%	20		
Methylene chloride	18.86	2.0	20.0	0	94.3%	80	120	19.0	0.835%	20		
trans-1,2-Dichloroethene	19.44	1.0	20.0	0	97.2%	80	120	19.4	0.0258%	20		
1,1-Dichloroethane	19.62	1.0	20.0	0	98.1%	80	120	19.8	0.645%	20		
cis-1,2-Dichloroethene	18.98	1.0	20.0	0	94.9%	80	120	19.3	1.87%	20		
Chloroform	19.62	1.0	20.0	0	98.1%	80	120	19.6	0.251%	20		
Carbon Tetrachloride	18.31	1.0	20.0	0	91.5%	80	120	18.5	1.11%	20		
1,1,1-Trichloroethane	18.69	1.0	20.0	0	93.5%	80	120	18.8	0.286%	20		
Benzene	18.58	0.50	20.0	0	92.9%	80	120	18.8	0.934%	20		
1,2-Dichloroethane	19.69	1.0	20.0	0	98.4%	80	120	19.9	1.02%	20		
Trichloroethene	18.85	1.0	20.0	0	94.3%	80	120	18.9	0.0387%	20		
1,2-Dichloropropane	18.64	1.0	20.0	0	93.2%	80	120	18.3	1.79%	20		
Bromodichloromethane	18.65	1.0	20.0	0	93.2%	80	120	18.6	0.440%	20		
cis-1,3-Dichloropropene	19.66	1.0	20.0	0	98.3%	80	120	19.6	0.209%	20		
Toluene	19.38	0.50	20.0	0	96.9%	80	120	19.5	0.776%	20		
Tetrachloroethene	19.62	1.0	20.0	0	98.1%	80	120	20.0	1.87%	20		
trans-1,3-Dichloropropene	20.47	1.0	20.0	0	102%	80	120	20.4	0.5227%	20		
1,1,2-Trichloroethane	20.00	1.0	20.0	0	100%	80	120	20.2	1.04%	20		
Dibromochloromethane	18.99	1.0	20.0	0	95.0%	80	120	19.3	1.38%	20		
Chlorobenzene	19.78	1.0	20.0	0	98.9%	80	120	19.9	0.525%	20		
Ethylbenzene	18.87	0.50	20.0	0	94.4%	80	120	18.7	0.933%	20		
m,p-Xylene	38.49	0.50	40.0	0	96.2%	80	120	38.9	0.984%	20		
o-Xylene	20.72	0.50	20.0	0	104%	80	120	20.7	0.2777%	20		
Bromofrom	18.61	1.0	20.0	0	93.1%	80	120	18.9	1.61%	20		

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

**CLIENT:** SHN Consulting Engineers and Geologists  
**Work Order:** 0602191  
**Project:** 003154, Simpson Arcata Reman

## QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID	Client ID:	Batch ID:	Test Code:	Units:	mg/L	Analysis Date	2/10/06 4:47:57 PM	Prep Date
LCS 02090601		R39706	INIC2_060210B			SeqNo:	570386	

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	% RPD	RPDLimit	Qual
Chloride	1.073	0.10	1.00	0	107%	90	110	0			
Sulfate	9.844	0.50	10.0	0	98.4%	90	110	0			

Sample ID	Client ID:	Batch ID:	Test Code:	Units:	mg/L	Analysis Date	2/10/06 4:47:57 PM	Prep Date
LCS 02090601		R39704	INIC2_060210A			SeqNo:	570333	

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	% RPD	RPDLimit	Qual
Nitrate (as Nitrogen)	1.083	0.10	1.00	0	108%	90	110	0			

Sample ID	Client ID:	Batch ID:	Test Code:	Units:	µg/L	Analysis Date	2/23/06 2:20:00 PM	Prep Date
LCS-15151P		15151	INICP1_060223B			SeqNo:	573187	

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	% RPD	RPDLimit	Qual
Iron	500.8	100	500	0	100%	85	115	0			
Manganese	488.1	2.0	500	0	97.6%	85	115	0			

Qualifiers:

ND - Not Detected at the Reporting Limit

I - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

**CLIENT:** SHN Consulting Engineers and Geologists  
**Work Order:** 0602191  
**Project:** 003154, Simpson Arcata Reman

**QC SUMMARY REPORT**  
Laboratory Control Spike

Sample ID	LCS-15157	Batch ID:	15157	Test Code:	PCPTW	Units:	µg/L	Analysis Date	2/14/06 3:07:09 PM	Prep Date	2/10/06	
Client ID:		Run ID:	ORG C4_060214A					SeqNo:	570852			
Analyte		Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	% RPD	RPD Limit	Qual
Tetrachlorophenol		4.632	1.0	5.00	0	92.6%	69	112	0	0		
Pentachlorophenol		1.158	0.30	1.50	0	77.2%	65	107	0	0		
Dibromophenol		4.87	0.10	5.00	0	97.4%	67	118	0	0		
Sample ID	LCSD-15157	Batch ID:	15157	Test Code:	PCPTW	Units:	µg/L	Analysis Date	2/14/06 3:27:48 PM	Prep Date	2/10/06	
Client ID:		Run ID:	ORG C4_060214A					SeqNo:	570853			
Analyte		Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	% RPD	RPD Limit	Qual
Tetrachlorophenol		5.219	1.0	5.00	0	104%	69	112	4.63	11.9%	15	
Pentachlorophenol		1.302	0.30	1.50	0	86.8%	65	107	1.16	11.7%	15	
Dibromophenol		4.92	0.10	5.00	0	98.5%	67	118	4.87	1.09%	15	

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

# North Coast Laboratories, Ltd.

Date: 24-Feb-06

**CLIENT:** SHN Consulting Engineers and Geologists  
**Work Order:** 0602191  
**Project:** 003154, Simpson Arcata Reman

## QC SUMMARY REPORT

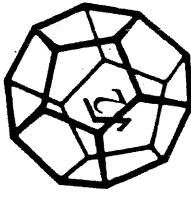
Sample Matrix Spike

Sample ID: 0602191-02B		Batch ID: R39706		Test Code: ICIONW		Units: mg/L		Analysis Date: 2/10/06 7:30:10 PM		Prep Date:				
Client ID:	MW-3	Run ID:	INIC2_060210B	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		11.22	0.10	1.00	10.1	110%	80	120	0	0	0	0	0	
Sulfate		10.36	0.50	10.0	0.573	97.9%	80	120	0	0	0	0	0	
Sample ID: 0602191-02B		Batch ID: R39704		Test Code: ICNOW		Units: mg/L		Analysis Date: 2/10/06 7:30:10 PM		Prep Date:				
Client ID:	MW-3	Run ID:	INIC2_060210A	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as Nitrogen)		1.150	0.10	1.00	0	115%	80	120	0	0	0	0	0	

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
R - RPD outside accepted recovery limits

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank



**NORTH COAST**  
LABORATORIES LTD.

5680 West End Road • Arcata • CA 95521-9202  
707-822-4649 Fax 707-822-6831

## **Chain of Custody**

Attention: <u>Fran Bowman</u>	Results & Invoice to: <u>SHN</u>
Address: <u>812 West Wabash Avenue</u>	Phone: <u>441-8855</u>
Copies of Report to: _____	Sampler (Sign & Print): <u>Dale S. Hiltz</u>
<b>PROJECT INFORMATION</b>	
Project Number: <u>03354</u>	Project Name: <u>Simpson Arcata Reman</u>
Purchase Order Number:	

<b>LABORATORY NUMBER:</b>		TAT <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 5 Day <input type="checkbox"/> 5-7 Day	
STD (2-3 Wk) <input type="checkbox"/> Other: _____			
<b>PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES</b>			
<b>REPORTING REQUIREMENTS:</b>	State Forms <input type="checkbox"/>		
Preliminary: FAX <input type="checkbox"/> Verbal <input type="checkbox"/> By: _____/_____/_____			
Final Report: FAX <input type="checkbox"/> Verbal <input type="checkbox"/> By: _____/_____/_____			
<b>CONTAINER CODES:</b> 1—1/2 gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other			
<b>PRESERVATIVE CODES:</b> a—HNO <sub>3</sub> ; b—HCl; c—H <sub>2</sub> SO <sub>4</sub> ; d—Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ; e—NaOH; f—C <sub>2</sub> H <sub>5</sub> O <sub>2</sub> Cl; g—other			
<b>SAMPLE CONDITION/SPECIAL INSTRUCTIONS</b>			
FJD cold contact			
<b>SAMPLE DISPOSAL</b>			
<input type="checkbox"/> NCL Disposal of Non-Contaminated			
<input type="checkbox"/> Pickup			
<input type="checkbox"/> Return			
<b>CHAIN OF CUSTODY SEALS Y/N/NA</b> <input type="checkbox"/>			
<b>SHIPPED VIA:</b> UPS Air-Ex Fed-Ex Bus Hand			

\***MATRIX:** DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

**ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT**